

SL-11 MC-172/1
Time: 0001 CDT
5/28/72

PAO Skylab Control at 5 hours Greenwich mean time. Mission Control is very quiet. The only discussion going on during the past hour concerns general procedures. There is some discussion now of a 31-second trim burn to be performed later in day 4. They are still waiting for the proper data to determine exactly the length of that burn. Earlier it was estimated at about 29 seconds, but it will be about 31 seconds now. And that won't be determined probably until later in the morning. There have been no new problems on the Skylab. Temperatures continue to come down and now in the low 90s and we'll probably get some data at Guam. The next pass at Guam is in a little over 2 minutes. And everything is functioning properly. This is Skylab Control at 44 seconds after the hour.

END OF TAPE

SL-II MC-179/1

Time: 5:52 a.m. CDT, 148:10:52 GET
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PAO Skylab Control at 10 hours 52 minutes and 32 seconds Greenwich mean time. At the present time the spacecraft is in range of our tracking station at Bermuda, and we expect to have a crew wakeup call at 6 a.m. central daylight time; that's a little more than 7 minutes from now. We'll have a crew wakeup call over Madrid, provided that the network is working properly. We did have some difficulty shortly - a short time ago with that. The crew wakeup call at 6 a.m. central daylight time will put the crew on a regular daily schedule of wakeup at 6 a.m. and going to sleep at 10 p.m. central daylight time. Immediately upon arising, the three crewmen will each have a blood sample drawn of the Scientist Pilot, Joseph Kerwin. The doctor will draw samples from the other two members of the crew and Paul Weitz will draw a sample from the doctor. These samples will be spun down in the centrifuge and then stored in the frozen compartment in the workshop for analysis upon return to Earth. This blood analysis will be performed on samples to be drawn four times during the first 28-day the Skylab mission. Today the crew will complete the rearranging of workshop equipment and prepare for more than 3 weeks of experimental research in medicine, materials processing, solar astronomy, Earth resources, and other corollary experiments. Activation or setting up of the space laboratory should be completed before lunch at 12 noon central daylight time. And during the hour lunch break the crew will conduct a live televised press conference, answering questions submitted by news people through Mission Control spacecraft communicator. After Dr. Joseph Kerwin has set up the necessary medical equipment, astronaut Paul Weitz will line the lower body negative pressure device as Dr. Kerwin observes his blood pressure and heart activity to learn more about changes in the cardiovascular system during long periods in space. This experiment will be repeated frequently during the coming months of Skylab activity. Astronaut Weitz will also ride the bicycle-ergometer, which measures changes in his blood pressure, heart rate, and metabolism as he exerts energy on the pedals of this stationary ergometer. Dinner is set for 6 p.m. central daylight time tonight, to be followed by additional rearranging and setting up of equipment for medical and Earth resources experiments. After daily status reports are completed and the regular crew medical conference is held in private, the crew is expected to retire about 10 p.m. central daylight time tonight. An interesting side note is that there will be some mass measuring done today - mass measuring of waste products, and the spacecraft communicator Dr. William Thornton, is principal investigator on that area. So the man who will be giving the wakeup call this morning is also a principal investigator on one of the first experiments to be performed - a medical experiment - to be performed here on day 4 of the Skylab mission. We expect to have acquisition of signal in

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approximately 4-1/2 minutes - a little less than 4-1/2 minutes. And at that time we should have a call from CAP COM or spacecraft communicator, Dr. Thornton, to the three Skylab astronauts. This is Skylab Control. We'll be staying up for the air-to-ground.

PAO Skylab Control. We have about 1 minute to acquisition of signal at Madrid, at which time we should have a wakeup call - that's exactly at 6 a.m.; that's 1 minute and 4 seconds from now.

PAO We have acquisition of signal at Madrid.

END OF TAPE

SL-II MC-180

Time: 06:02 CDT, 148:11:02 GMT

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CC

Skylab, Houston; Madrid for 5 minutes, AOS.

CC

Skylab, Houston; AOS for 4 minutes.

SC

Good morning, there.

PAO

Skylab Control, Houston; at 11 hours 9 minutes Greenwich mean time. CAP COM, Bill Thornton, did place a couple of calls to the Skylab crew, closing out their rest period. We received no definite acknowledgment from the crew, or no discernable knowledge, that they were in fact awake and perhaps maybe wanted to sleep in until our pass over Carnarvon. We show Carnarvon tracking ready to acquire the Skylab space station at some 23-1/2 minutes from this time. We're now at 11 hours 10 minutes Greenwich mean time and this is Skylab Control, Houston.

END OF TAPE

SL-II MC-181/1

Time: 6:32 a.m. CDT, 148:11:32 GET

PAO Skylab Control, Houston, at 11 hours 32 minutes Greenwich mean time. We're less than a minute away now from acquiring the Skylab orbital array over Carnarvon, and we'll stand by and monitor. We presently show an orbit of 239.6 nautical miles by 234.9 nautical miles for Skylab. We're now acquiring data from Carnarvon Tracking. Astronaut Bill Thornton still working as the CAP COM in the Mission Control Center; Don Puddy, our flight director.

PAO Skylab Control, Houston. Still no callup has been placed by CAP COM, Bill Thornton. Instead, we're - the indications are that we plan to let the crew awaken at a leisurely pace. We've got some 6-1/2 minutes remaining on this Carnarvon pass. The next station to acquire will be Honeysuckle, almost back to back, less than a minute between LOS and AOS.

PAO Skylab Control, Houston, at 11 hours 40 minutes Greenwich mean time, less than 3 minutes remaining on this Carnarvon pass. CAP COM Bill Thornton has not yet attempted to awaken the crew. Today's Flight Plan - The first thing following wakeup is a postsleep checklist. There's a reasonable amount of pad in that portion of the Flight Plan in terms of timing. We'll stand by and continue to monitor. At 11 hours 41 minutes Greenwich mean time, this is Skylab Control, Houston.

PAO Skylab Control, Houston, 11 hours 45 minutes Greenwich mean time. We're now under acquisition with Honeysuckle. Bill Thornton has not attempted to communicate with the crew as yet during this pass over Australia on the 199th revolution. We'll stand by and continue to monitor; and this Skylab Control, Houston.

PAO This is Skylab Control, Houston, at 11 hours 49 minutes Greenwich mean time. We've had loss of signal with Carnarvon. The next station to acquire, on the 199th revolution, will be Texas. Texas acquisition, some 27-1/2 minutes from this time. Meanwhile, in the Mission Control Center, we will have a changeover in CAP COM assignments. Henry Hartsfield replacing Bill Thornton at the capsule communicator's position. If we do not hear from the crew at the onset of the Texas pass, Hartsfield definitely plans to place a wakeup call while under Texas acquisition. At present, we have no definite indication that the crew is awake. We had no communication with them while passing over the two Australian tracking stations. We're at 11 hours 50 minutes Greenwich mean time, this is Skylab Control, Houston.

END OF TAPE

SL-11 MC-182/1

Time: 7:15 a.m. CDT, 148:12:15 GMT
5/27/73

PAO Skylab Control, Houston, at 12 hours 16 minutes Greenwich mean time. Less than 1 minute away now from acquisition of Skylab through Texas tracking. Meanwhile in the Mission Control Center we've had a shift changeover of flight control teams. Flight director, Neil Hutchinson who heads the silver team of flight controllers, now taking the reins at the flight directors console. And Henry Hartsfield is presently our CAP COM. We do expect conversation with the crew aboard Skylab during this stateside pass. We'll stand by and monitor. This is Skylab Control, Houston.

CC Skylab, Houston. We've got you stateside for 16-1/2 minutes. Good morning.

SC Hi there. Our hands are full of bloody medical equipment, but we'll recover at 8.

CC Roger.

SC Hey, Bill. Joe just drew all three of us. That went very smoothly.

SC CDR just finished shaving. Breakfast is cooking and I think with a little luck at all we might get on to a good routine. This is our first real postsleep crack at the checklist, and we'll get a good chance to see how long it takes us.

CC Roger. Copy.

PAO Skylab Control, Houston; 12 hours 19 minutes Greenwich mean time. That conversation - first conversation of the morning with the Skylab crew. The crew - Paul Weitz, Pete Conrad - Ralking - report being that their blood samples were drawn on all three of the astronauts by medical doctor scientist astronaut, Joe Kerwin. We'll stand by - continue to monitor during this stateside pass. We've got some 14 minutes remaining before we have loss of signal.

PAO Skylab Control, Houston, at 12 hours 22 minutes Greenwich mean time. Skylab presently passing over the states on the 199th revolution of the orbital workshop. The crew aboard Skylab apparently having their first breakfast inside the workshop. We had the report from commander Pete Conrad that breakfast is cooking. We'll stand by and continue to monitor. We've got some 10-1/2 minutes remaining before we have loss of signal.

END OF TAPE

SL-11 MC-183/1

Time: 7:28 a.m. CDT, 148:12:25 CET

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CC Skylab, Houston. We're about 30 seconds
from LOS. We'll be picking you up at Madrid at 37.

SC Roger.

PAO Skylab Control, Houston. We've had loss
of signal. The next station to acquire is Madrid - this in
approximately 3-1/2 minutes.

END OF TAPE

SL-II MC-184/1

Time: 7:37 a.m. CDT, 148:12:37 GET
5/28/73

CC Skylab, Houston through Madrid for 7 minutes.
SC Hi there.
CC Hello.
SC I've got a question Henry. According to my
checklist last night - if it is Hank.
CC Roger.
SC I turned off the - opened the circuit
breakers down in the workshop to the waste tank vent heater.
Now we're going to dump some urine in that this morning -
urine bags. I turned them back on for now though. Is that
an off at night, on in the morning kind of thing?
CC Let me take a look at that, Paul.
SC Okay; it was written in. It was a pen and
ink change to my checklist. Anyway, as of right now they're on.
Also, we've got almost a full water tank to the command module
plus Pete wanted me to ask you about. I guess somewhere in his
procedure he closed the water tank release valve.
CC Roger. Copy. Let me look into that.
SC Okay.
CC Skylab, Houston. Answer on the vent heaters
first. We plan to fly with the vent heaters off and the circuit
breakers open. And we'll monitor the waste tank pressure to
tell how the screens are doing. And I'd like to remind you, you
also have panel 800 to keep up with that; 0.09 is the magic number.
SC Okay.
SC Henry, sometime today have the stowage
guys look something up for us. Will you, please?
SC How many wash cloths a day can we use, and
how many towels a day?
CC Okay; how many wash cloths and how many
towels. I'll get that for you.
SC Yeah, you can tell we're starting to live
in here now.
PAO Skylab Control, Houston. That's Pilot
Paul Welts speaking with Henry Hartsfield at CAP COM in the
Mission Control Center.
SC Houston, how do the temperatures look
this morning? Are they still coming down?
CC That's affirmative. It looks like they've
dropped another 5 or 6 degrees over night. Some of these
structure temperatures that were up around 120 like the ceilings
are down to around 92 to 93 now.
SC Have your thermal people plotted a trend?
Do you know where it's going to level off at?

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Time: 7:37 a.m. CDT, 148:12:37 CXT

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CC Say again, Paul.
SC Where is the temperature going to level
off at, Houston?
CC Oh, okay. Let me get an answer on that.
PAO That's Paul Weitz inquiring about the
cabin temperatures.
CC We expect the temperatures to stabilize
out somewhere around 75 degrees.
SC Thank you.
SC Say, Hank, we're settling in pretty good.
Of course, we asked you a question on the towels. Most every-
body cleaned up today, shaved, and I wanted to advise you on all
the urine that we've collected so far. It's been in the com-
mand module. And all those urine samples are - I'm guessing -
probably 70 percent air. Starting today is the first good urine
bag that we've been able to install with a full vacuum pull on
them, so I expect to see things approve on that with tomorrow's
sample. If it weren't for the fact that we had such a spectacular
view out of the wardroom window, which we didn't open until
yesterday evening late, I'd think we were back in Houston swimming.
CC Roger. Copy.
SC And right now we're over Italy, and weather
is spectacularly clear. We can see just about all of Italy from
one end to the other, all clear across the Mediterranean. Going
over some ground I've never seen before.
CC Roger. Copy. And we're just about LOS
now, Pete. And we'll be coming up on Carnarvon at 16.
SC Okay. Hopefully, we'll all be done breakfast
by then and we got a few other questions for you and we'll
try working the probe and whatever else we need to do.
CC Okay, I'll try to have an answer on the
CSM water then.
PAO Skylab Control, Houston, at 12 hours 46 min-
utes Greenwich mean time. We've had loss of signal with Madrid.
The next station to acquire will be Carnarvon in some 36 minutes.
Meanwhile, we've heard from the crewmembers aboard Skylab,
sounding in good spirits. The blood samples were taken earlier
this morning by a medical doctor, Joe Kerwin. The crew in-
quired about cabin temperatures and got a report from CAP COM,
Henry Hartfield, that they are steadily dropping, expected to
flatten out at some 75 degrees. And following the postalee,
checklist, the Skylab crew this morning will complete the
activation items carried over from yesterday. These include
such things as relocation of equipment, items such as boxes -

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large boxes, portable fans, a vacuum cleaner. A seal will be taken off in the wardroom window. The shower will be activated, and they will properly prepare their photographic equipment, such things as lenses and cameras mounted in proper places. Also, the return water containers, these are the water containers placed in the command module, will be filled in the workshop and returned to the command module for that time when the crew separates and returns to Earth. We're at 12 hours 47 minutes Greenwich mean time, and the next station to acquire will be Carnarvon. This is Skylab Control, Houston.

END OF TAPE

SL-11 MC-185/1

Time: 08:15 a.m. CDT, 148:13:15 GMT

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PAO Skylab Control, Houston; at 13 hours 15 minutes Greenwich mean time. Now approaching Carnarvon acquisition. This being a short pass - We now show Skylab on it's 200th revolution with an orbit of 239.6 nautical miles by 234.9 nautical miles. We'll stand by and monitor conversation.

CC Houston. We're about 30 seconds LOS Carnarvon and we've got some answers to your questions. We'll tag up again at Goldstone at 53.

CC Skylab, Houston. How do you read?

CC Skylab, Houston. In the blind, about 10 seconds from LOS. Goldstone coming up at 53.

SC Roger, Houston.

SC Sorry. I answered you three times on B channel.

CC Roger.

PAO Skylab Control, Houston; at 13 hours 18 minutes Greenwich mean time. We've had loss of signal through Carnarvon; receiving only a brief acknowledgment from commander Pete Conrad aboard Skylab to the calls of Henry Hartfield. It turns out Pete reported shortly before loss of signal that he was replying on B channel, which is the channel provided for tape dumps. We expect acquisition with Goldstone some 34 minutes and 30 seconds. To quickly go over the morning's activities thus far, the crew awakened at approximately 12:16 Greenwich mean time following a call from Henry Hartfield over Texas. They sounded chipper and appeared ready to move into some semblance of mission normalcy, performing the scientific and medical experiments onboard for the next several weeks. Blood samples were drawn on all three crewmembers by medical doctor, Joe Kerwin. They had breakfast in the wardroom. Most of the morning will be spent by the Skylab crew checking out the - or closing out the activation items. These include such things as relocating the equipment like boxes, portable fans, vacuum cleaner. The seal will be taken off the wardroom window. The shower will be activated and photographic equipment will be prepared properly for later usage. The returned water container will be filled in the workshop and taken into the command module for later use during entry. We now show 13 hours 20 minutes Greenwich mean time. The next station to acquire again is Goldstone. That's some 33 minutes away. This is Skylab Control, Houston.

END OF TAPE

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Time: 08:52 CDT, 148:13:52 GMT
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PAO Skylab Control, Houston; at 13 hours
52 minutes Greenwich mean time. The ah - Skylab space
station now on its 200th revolution with an orbit of 239.2
nautical miles by 234.7 nautical miles. Standing by now
for acquisition through Goldstone.

CC Skylab, Houston; stateside for 17 minutes.
SC Hi there, Houston. Say I've got a mystery

question for you.

CC Okay. Go ahead.

SC I'm suppose to fill three transfer water
bags to put in the command module. They're originally stowed at
A-9, and I can't find them on any stowage list, including A-9.
A-9's had kind of a rat's nest, so I didn't bother to look in
there, but I'm not sure they're aboard. Can you put a tracer on
what happened to those?

SC You know what I'm talking about?

CC Roger. We're just talking about it. I
think those are in the workshop, F507-A-9.

SC S, what?

CC F507.

CC That's under the water purification rack,
I think, Pete.

SC Oh, that A-9. Very good.

SC Solved the mystery. Good thing I didn't
look very hard.

CC Hey, we've got a few things that we'd like to
go over right here, if we could now, Pete.

MCC That's it.

CC Okay. I guess the first question is concerning
general message 0316 Charlie. We want to know if you put
those answers on the tape recorder last night. That was the
five questions from biomed.

SC Well, we're going to have to trace the
message down. I - Wait a minute.

PAO That's Pete Conrad talking with CAP COM,
Henry Hartsfield, during this stateside pass.

SC Yeah, we're going to have to trace it down.
Everybody passed the buck. Joe said it was for somebody
else, but I didn't see it, Paul hasn't seen it.

CC Okay. Just as we were signing off last
night, we got acknowledgment that you were going to put it on
tape. We've been having trouble with the tape, is the reason
we're asking and want to make sure it did get on there. In
regard to the water question you had. The relief valve should
remain off in the command module. We would like for you to
dump the water tonight after dinner. And that dump should be

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in accordance with general message 314. We had sent an earlier message, 313, in regard to that. But, we've changed configurations. So, 314 is the message you should use for the water dump.

SC

Okay. Do we have that message onboard, now?

CC

Roger. It should be onboard.

CC

We're also trying to track down our problem with the tape recorder - I mean the teleprinter. Last night you reported a problem with the docking probe message. Was a portion of the message mission - missing? Or was it split up?

SC

No. It printed about 2/3 of the way across it. It ended the sentence. But then the last third was really the beginning of the sentence. Then it was about a half a line apart. Very confusing.

SC

Roger. Have the teleprinter messages been printed evenly so far, or is it kinda alternating between light and dark printing.

SC

It was pretty good this morning.

CC

Roger. Copy. And in answer to the question on the towels and washcloths. That information is on page 5-2 of the stowage book. It says basically, that you're allotted 1 towel per day and 2 washcloths per day. Per man.

SC

Okay. Thank you. Pete's looking at the messages. The PLT, I tried but despite my promise, I couldn't get the apricots down last night. So, if you'll pass that down to the - well whoever cares.

CC

Roger. Copy. May we assume that you're drying the second suit, now?

SC

Yeah. That's in process. Drying has not yet started.

CC

Okay. And we'll get the third one tonight. And ah - I guess we've got a general question here. We didn't tag up last night, if it's possible, we'd kind of like to get an idea of about where we are in the Flight Plan.

SC

Okay, Hank. The CDR's essentially all done to regroup. Joe and Paul ought to tell you where they are.

SC

Okay. If you'll look on page B-4, I'll pick you up with what I've accomplished, Hank

CC

Okay. I'm looking.

PLT

Okay. The PLT has done trash bags, fire hose, condensate module, electric panels, wardroom window, vacuum cleaner, and that's it. Every thing else on that page is subsequent or still open and are in work.

CC

Roger.

CDR

Okay, Hank. On the command module, appears a third LIOH canister, to day 4, which is used, I presume

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you want us to throw that away?

CC

That's affirmative.

CC

Also, Hank, that circuit breaker you wanted
us to check on 102 for a solenoid door is closed, and was closed.

CC

Roger. Thank you.

CC

Hank, unfortunately I got every message
but 313 and 314. And ah - I've got 313 - -

CC

313, 41a-B - -

CC

411-A. Send me 314 again, and then I think
we'll be all right.

CC

Okay. Would you like to have accounting of
what you should have up there?

CC

No, don't confuse me. I'm confused enough
right now. (chuckles). Starting tonight, we've got to get
organized on that. Those message numbers don't make sense
to me, anyhow. And I always sit here and scratch a list of a
lot of stuff.

CC

Okay. We're - we're looking at that too, Pete.
We think there's got to be a better way here. We're also concerned
that we don't have a way to check to make sure the messages are
getting up. We sent them and we're not sure you're getting them
all, especially since you've been having a few problems with
the teletypewriter.

CC

We will send you 314 again.

CC

Okay.

CC

Yeah. It's taking us awhile to get the hang of
things. I'd say, this along with the M110 and everything,
it probably took us 45 minutes to an hour longer. But, we're
figuring out things that are costing us time. Number 1, Rusty
broke his spec to me. The water system does, in fact have
gas in it. And if you go to 2-1/2 ounces of water in a coffee
thing and it won't handle it. You've got to let air out and mess
around with it. So, food handling, I think it's taking us a
little longer than normal, right now than on the ground and I
don't think that's to be unexpected. I think we're getting a
little bit better hang on it, as we get better organized. We
all had to refresh our memories today as we went through all the
waste management stuff exchanging filters, I mean changing uric
bags and so forth. So, I think we've got some learning curves to
go yet, here in zero g. There are places that not having restraint
is kind of bothering us a little bit. As an example, we're all
using triangle shoes and it doesn't work too well with those straps
in the waste management compartment. Your feet don't tend to
stay under the straps and we can't fasten the straps. They're
too stiff to make the velcro work on them. So, you're going
to work off the wall or the ceiling. Just little areas like
that. As a rule, moving the big stuff and everything is - -

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SC - - just like - -
CC Pete, we lost the last part of that transmission. We handed over sites right in the middle of it.

SC Okay. Where was I?
CC Well, we got to the part where you said you we're having trouble with the shoes in the WMC.

SC Yeah. You can't use those foot restraints in the waste management compartment when you have triangle shoes on. The material's so stiff that even if you hook them over to make them big enough to put your feet in, the velcro won't stay stuck and you just - you'd have to apply pressure to hold a little friction in there. They just - They won't hold, so you slip out of them. So we're ricocheting off the walls in there. We'll probably work something out here a little bit later. I would say that big boxes - All that big gear, it's no problem at all to handle any of that. As a matter of fact, most of the food boxes were done one man. So, big stuff actually went quicker than expected. It's just a lot of this little stuff getting anchored, doing it, collecting it, and figuring out where to go next. And I think we'll pick up as we go along here.

CC Roger. That was a good rundown, Pete.
CC SPT, what are you doing for us? - -
SC We've got a lot of other things that are not reflected in the workload, I'm sure. If you can imagine, it's always been said on every flight. You really generate a lot of trash. And that command module was a sight to behold. Now, Joe spent the better part, for a couple of hours yesterday just cleaning the command module up. And it still needs some more, you know, just a little bit more work. But, the command module is just about in the right configuration now. And we did dispose of an awful lot of trash last night. We got 3 large plenum bags. We haven't got those below, yet. But, we're talking about waste management. We almost thought we'd jammed the trash airlock yesterday. The bag that had the UCTAs in it really expanded. And we were just flat lucky to get that one out of there.

END OF TAPE

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CC: Don't scare us like that.

SC: Don't scare you. It scared us worse than it scared anybody else. So, we're - we're taping our plastic urine bags because they were not evacuated. Just as a rule, I think we're going to tape things, and we're only going to use about half the volume of the trash airlock, just to be on the safe side. We had a couple of other bags that were pretty firm shoving them out, and that really makes me nervous. So that may change the trash bag usage a little bit.

CC

Roger.

CC

this morning?

SPT, could you tell us what you're doing

SC

his favorite task.

The PLT is doing the portable water tank,

CC

Roger.

SC

how to catch all the parts out of the ratchet wrench, which disassembled itself, and reassemble the ratchet wrench

CC

Copy.

CC

wondering if you could put the TV somewhere and turn it on like you did yesterday? We'll just record it as we can.

SC

I'll go - - You want it now? Okay, it's set up for the press conference.

CC

Not now.

SC

Say again.

CC

not prepared to get it now, but we'll try to get it next time around. We don't want it exactly right now. We're

SC

wardroom window is pretty bright, and I gather the press conference will be at daytime and we may have to draw the shade (garble), but you can tell us what you think we can do to (garble) picture next pass. Okay, it might be a good thing because the

CC

Okay.

CC

Could you tell us where the SPT is, Pete?

SC

has been handling most of the MI temps. He - he's doing his urine drawer and, he

CC

Roger. Could you give us an idea of his status on his portion of the activation?

SC

He's coming to give it to you right now.

CC

and we'll be coming up on Madrid at 15. Skilab, we're about 30 seconds from LOS

SC

handle switch that makes it switch between tightening and untightening. And we may have lost the ratchet handle for good We lost the retainer ring off the ratchet

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because we got all the parts but the retainer ring and I suspect it broke.

CC

Roger. Copy.

IAO

Skylab Control, Houston, 14 hours 11 minutes Greenwich mean time. We've just had loss of signal. Next station to acquire will be Madrid in approximately 4 minutes. During the stateside pass we've heard mainly from commander Pete Conrad who gave a very garphic rundown of what life was like in the workshop. The discussion centered in part on the teleprinter operation and he described such things as - as the differences he found in food handling in the wardroom in space versus simulations on the ground. We'll stand by and keep the line open and pick up Skylab as we next acquire over Madrid.

END OF TAPE

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Time: 09:13 a.m. CDT, 148:14:13 CET

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PAO Skylab Control, Houston; at 14 hours
15 minutes Greenwich mean time, standing by now for acquisition.
CC Houston through Madrid for 9 minutes.
SC Okay, Hank. We'll be with you in a minute.
CC Okay. And for information only, it looks
to us like the coolant loops are settling down, and we're going
to be commanding back to single-loop operation. We'll be putting
the primary loop on inverter 1; turn secondary loop off; and
we'll be using switchover logic 2, and turning switchover
logic 1 off. As you recall, we had some trouble with primary
loop in the unmanned phase. It may switch over; if it does,
you shouldn't get a caution and warning. But we'll keep you
advised.

SC Houston, SPT.

CC Go ahead.

SC Okay, my status says that yesterday I
completed thru ambien. food transfer, which took about 3 hours
to accomplish. And, this morning after I cleaned up M110 and
finished my urine drawings and all that stuff. I'm going to
start on body mass measuring device activation and just try and
work through it.

CC Roger. It sounds like a good plan.
Thank you, Joe.

PAO Skylab Control, Houston; at 14 hours
22 minutes Greenwich mean time. About 2-1/2 minutes remaining
on this pass over Madrid. We now show an orbit for Skylab
of 240 nautical miles by 234.8 nautical miles. We will monitor
the balance of the pass.

CC Skylab, Houston. We're about 10 seconds
from LOS; Honeysuckle at 01.

PAO Skylab Control, Houston; at 14 hours
25 minutes Greenwich mean time. We've had loss of signal
now with Madrid. The next station to acquire will be Honey-
suckle, some 36 minutes from this time. Meanwhile, to go
over what has occurred, thus far this morning the crew awakened
at approximately 12:16 Greenwich mean time over Texas. Shortly
after wakeup, blood samples were taken on all three crewmembers
by Dr. Joe Kerwin. The crew then had their first breakfast
in the wardroom of the workshop. Some of the food preparation
took longer than in simulations, Commander Pete Conrad reported.
Conrad also gave a graphic description of ease and difficulties
by which some things are performed in the workshop. All three
crewmembers have passed along to Mission Control their status
on where they are in the activation checklist. We're at
14 hours 26 minutes, and this is Skylab Control, Houston.

END OF TAPE

SL-11 NC189/1

Time: 10:00 a.m. CDT, 148:19:00 GMT

5/28/79

PAO Skylab Control, Houston, at 15:00 hours
Greenwich mean time. Coming up now on acquisition with
Honeysuckle. Standing by at this time for conversations
between CAP COM, Henry Hartsfield, and the crew aboard Skylab.

CC Skylab, Houston through Honeysuckle for
5-1/2 minutes.

SC Roger, Houston.

CC Okay, we sent up a message this morning.
Message 4015 regarding CBRM number 15. We'd like for you to
disregard that.

SC Okay, that's one we happened to get.

SC And I will disregard it.

CC And for your information, we're going
to have live TV at Goldstone on this pass coming up here
shortly to take a look at our settings.

PAO Skylab Control, Houston. About 3 minutes
remaining on this pass over Honeysuckle.

SC Still with us, Hank?

CC Roger.

SC As you can tell, we got the most important
thing running now, the music. And that's speeding everything
up.

CC Hey, that sounds great.

SC We're getting caught up; slowly but surely.

SC Got a comment for you on the iodine tablets
for the CM water bags to pass on to the next flight. The first
one just disintegrated into powder and disappeared into the
atmosphere. They've apparently got very, very dry. It may
have been as a result of the heat in the vehicle, but they have
to be extremely careful with them. We have to iodine our water
because we only had 3.8 parts per million and we needed 4 not
to do it.

CC Roger. Copy.

CC Hey, Pete. After y'all got your heads
together, did you ever decide whether you answered that message
316 or not? On the tape recorder?

SC On 316. Wait till I find it.

CC That was the one we went up last night
with the five questions from BIOMED.

SC Is that the BIOMED?

CC Roger. There were five questions
that came up on the teleprinter last night that we didn't
get to in the evening status report.

SC Okay.

SC Hey, Hank. I can answer the questions
for myself, or do you want me to put them on tape?

CC Well, got about 20 seconds to LOS,
Pete. You could put them on tape or we can get them over
stateside. We should be coming up on Hawaii at 21. There's
a possibility that we won't have voice at Hawaii. If not, we'll

SL-11 NC169/2

Time: 10:00 a.m. CDT, 149:15:00 GMT

9/28/73

get you at Goldstone at 29. And --

SC

Okay, we'll put it on B channel.

CC

Okay.

SC

Bye. See you at the states.

PAO

Skylab Control, Houston, at 15 hours

7 minutes Greenwich mean time. We've lost acquisition through Honeysuckle. The next station to contact, Hawaii. However, there is a possibility of no voice communications this pass with Hawaii. Hawaii reported that they had lost drive in their USB antenna and were earlier uncertain as to whether or not they would be up for this pass. However, network has just reported that the drive has been fixed. So we can expect voice contact with the crew through Hawaii. Also, CAP COM, Henry Hartfield, advised the crew aboard Skylab that there would be live television during this Goldstone pass. We expect live television to be fed into the Mission Control Center on this pass over Goldstone. This in part would allow an opportunity to check the lighting through the wardroom window for the events scheduled on the next stateside or over the next stateside pass where the crew will answer questions from news media. We're at 15 hours 8 minutes Greenwich mean time, and this is Skylab Control, Houston.

END OF TAPE

SL-II MC-190/1

Time: 10:20 a.m. CDT, 148:15:20 GMT

5/28/73

PAO Skylab Control, Houston; at 15 hours 20 minutes Greenwich mean time. Less than a minute away now from Hawaii acquisition of Skylab. Earlier, Hawaii had reported that they had lost drive in the USB antenna at that station. However, a subsequent report indicates that that antenna is back on the line. We do expect a voice contact with the crew over Hawaii. Also, we do expect live television to be fed into the Mission Control Center on the Goldstone pass, following Hawaii. We're approximately 8 minutes 40 -

CC Hawaii in 7 minutes.

SC Roger, Houston.

CC Skylab, for information, you'll be pleased to know that ATM is three-fourths through with their ground commanding checkout, and they're on schedule, and so far no anomalies.

SC That - that's super.

CC And also, since we've got this bird squared away in solar inertial, we haven't used any TACS for the last 20 hours.

SC We did a double cheer because I'll tell you there's nothing that gives you a bigger fright than be standing down here in the wardroom and have that TACS go off. It sounds like somebody's banging on the bottom of this thing with a sledge hammer.

CC Roger.

SC Say, I don't know what kind - where are your temperature sensor are, but it's obvious that that sail does have a wrinkle in it. We can - The walls have cooled off enough that I can almost plot the shape of that sail by running my hands along the wall. And right where the iodine - you know, the water iodine container 505 is mounted on the wall, that's a pretty hot spot over there. It's slightly triangular shape, as we indicated. And if you look at the television pictures, I think you can see where the sail didn't quite unfold there. The three front water tanks are still holding heat right above the airlock. But the back water tanks have noticeably cooled down. They're still hot, but that tap is coming down pretty rapidly.

CC Roger. Copy. And we saw that triangle shape at the rear of the sail in the TV.

SC I think we're going to have to live with that. But if the temperatures keep coming down the way you say they are, why it's going to get real pleasant in here. It's not really bad now. I wouldn't want to be riding the bicycle or anything, but it's not bad just whistling around doing the work we're doing.

CC Roger.

SL-II MC-190/2

Time: 10:20 a.m. CDT, 10:15:20 CDT

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PAO Skylab Control -
SC - were you still - I guess the schedule
still shows a 92/171 this afternoon?
CC That's affirmative.
SC Well, Dr. Kerwin suggestion it is pretty
warm down here yet. And he is proposing that the 92 be a
one-step only, at 30 millimeters, and the 171 be baselined for
5 minutes the first step, with an optional 5 minutes of the
second step. And let it go at that and see what kind of
results we get.
CC Okay; we'll work that.
SC All right.
CC That's what he said. Sorry about that.
CC Skylab, Houston. We're about 30 seconds
from LOS. We'll be coming up on Goldstone at 30 for a data
recorder dump and live TV.

END OF TAPE

SL-11 NC171/1

Time: 10:28 a.m. CDT, 148:15:28 GMT
5/28/73

PAO Skylab Control, Houston; at 15 hours 29 minutes, Greenwich mean time. We've had loss of signal with Hawaii. Less than a minute away now from acquisition through Goldstone, where we expect a live television transmission. This is Skylab Control, Houston.

CC Skylab, Houston through Goldstone for 8 minutes, and we've got a picture.

SC Roger.

CC Pete, looks like there's a bright light over your left shoulder that's washing out the picture a little bit.

CC Yeah, right there. It's a bright spot, looks like around the top center.

SC Did that do it?

CC Okay, it's looking a little better. It's still pretty bright at the top left of your picture, which is over the left, top left of the wardroom window.

SC Houston, SPT.

CC Go ahead.

SC The BMFD is activated. No problems and ask Bill or whoever is there to look up the weight corresponding to the following time: 6.82289. I gave it a one whiz to see how much I weighed. I haven't got the cal card out yet.

SC I got it right down here, Bill. And, the preliminary guess it looks as if we're going to need the shoulder straps. And we are gonna need to fix them there pretty good.

CC Roger, underatand. 0.82289.

SC The first digit was a 6.

CC Roger. 6.82289.

SC That's right.

CC Okay, you moved the camera a little bit and the lighting is a lot better.

SC I just got the card out, Hank, and that gives him 178. He's got his triangle shoes on and his pockets are full of watches and all that and his clothes. I guess, probably pretty close.

CC Roger.

CC Go ahead.

CC Skylab, Houston. Are you - Do you want to take a look at it with the wardroom window open and see what happens?

SC It's pretty bud, Hank.

CC Wow, that wiped it out.

SC Give it again.

CC Okay, it's still pretty much - stops it down to all you can see is a bright light and darkens up the wardroom. So I guess we're gonna have to leave that shut.

SC Say, who are we press conferencing with - what's the general nature of it for? It's kinda early, isn't it?

SL-II NC191/2

Time: 10:28 a.m. CDT, 148:15:28 GMT
9/28/73

CC: Okay, it's gonna be pretty much like Apollo, Pete. We'll have a list of questions we'll run up at you.

SC

All right.

CC

Skylab, Houston. We're about 40 seconds from LOS. We'll be picking you up at Bermuda at 43.

PAO

Skylab Control, Houston. The bag in front of Pete Conrad is a command and service module return water bag.

PAO

Skylab Control, Houston; 15 hours 40 minutes Greenwich mean time. Some 3 minutes away now from acquisition through Bermuda. During that pass the Science Pilot, Joe Kerwin, reported on the calibration of the body mass measurement device. This is used in experiment M172 designed to validate and use of body mass measurement system and subsequently determine the time, course, and magnitude of body weight changes of crewmembers during the course of the Skylab mission. We're about 2 minutes 25 seconds away now from acquisition with Bermuda. This is Skylab Control, Houston.

END OF TAPE

SL-11 KC-192/1

Time: 10:40 a.m. CDT, 148:15:40 GMT

5/28/73

SC

Skylab, Houston through Bermuda for 6 minutes

SC

Roger, Houston.

CC

And, Skylab, if you haven't already done so, we'd like to get the TV camera off until just prior to Goldstone.

SC

It's off.

SC

Hey, Hank. You still with us?

CC

Roger.

SC

I gave you the answers to 316 on B channel.

CC

Roger. Thank you, sir.

SC

You're welcome.

SC

What are we over now? It sure is cold down there. It's got snow on the ground and a lot of ice in the water.

CC

Looks like you ought to be coming up over Labrador.

SC

It's very interesting. Let me give you a little observation now. I can see icebergs that are big enough to see from here. They're sticking out like a sore thumb.

SC

Could you copy that, Hank?

CC

Roger.

PAO

Skylab Control, Houston; 15 hours 48 minutes.

We've heard a description from - -

SC

The Sun angle's right also. I can see a lot of ship wakes and if I catch them just right in the Sun, I can see the ship itself for a second and then it's gone again.

CC

That's a keen eye.

SC

The PLT and the SPT just said they wish they had time to gawk out the window. I think I better go back to work. I'm getting a message.

CC

(Laughter) Roger. We're about a minute from LOS now. We'll be coming up on the Canaries at 52.

PAO

Skylab Control, Houston. We've been listening to the description by commander Pete Conrad as he looks out the window in this northerly part of the orbit in a vicinity of 50 degrees north.

END OF TAPE

SL-11 MO-193/1

Time: 10:50 a.m. CMT, 148:15:50 GMT

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CC
10 minutes.

Skylab, Houston through Canaries for

SC Roger.
SC Hey, Henry. We're passing over a bunch of medium small islands. Do you know what they are?

CC I will guess that to be the Azores.
SC It's a cloudy day there then. Henry, you can sure see the contrails from up there. They stand out like a sore thumb. Also, apart from Asia, we'll probably take a picture of it and maybe show it to you on TV. Right smack in the middle of the wardroom window, we've got a piece of ice. It appears to be on the inside of the outer pane, slightly smaller than a dime, and it's got the typical frosted finger edges to which waxes and wanes as we go in and out of daylight.

CC Roger. Copy.
SC And it was there when we went ahead and put the window cover on. I think it's been there since the thing got in orbit.

CC Roger.
SC Let me make another observation, Hank. Speaking for myself, is that having trainers of as high fidelity as we did sure helps when you get up there. I'll tell you, it's worth all the time, and I think the money that we put into it, because it's sure making this thing go. It's not going too fast anyway, but it'd go a whole lot slower if we hadn't had the gear of work with it that we did.

CC Roger. Copy.
SC Okay. I can see the point of Spain here and the Straits of Gibraltar. And now that I gave the P-CDR ration about gawking out the window, it worked. He moved and now I'm at the window. And it also appears that for several hundred miles along the west coast of Africa, there's a lot of stuff in the air. It looks like they may have had some pretty good sand storms out there recently.

SC Hank.
CC Rog-o.
SC Okay, also there's a group of islands off the west coast of Africa that we're coming up on, the wind is prevailing out of the north. And the (gusts) behind them are really something. They stretch out from what must be 200 to 300 hundred miles down wind of them.

CC Roger. Copy.
PAO That's Paul Wells describing the west coast of Africa as Skylab passes overhead, under acquisition with Canary tracking.

SL-II NC-193/2

Time: 10:50 a.m. CDT, 148:19:50 GMT

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CC Skylab, Houston. We've been talking about the ice in the window, and, you know, as part of our power save we didn't turn the wardroom window heater on during activation. But we think that if we open the vent now and try to drive it out, we may wind up in a worse situation such that we'd have to keep that heater on all the time. So as long as it stays small, about the size of a dime, we're recommending that we just leave it as is.

SC

Okay.

CC

Skylab, Houston. One minute from LOS.

Honeysuckle at 37.

END OF TAPE

SL-11 NC194/1

Time: 11:36 a.m. CDT, 148:16:36 GMT

5/28/73

PAO Skylab Control, Houston, at 16 hours 36 minutes Greenwich mean time. Now approaching acquisition with Honeysuckle in less than 1 minute acquisition time with Honeysuckle. We presently show Skylab on the 202 revolution with an orbit now of 239.9 nautical miles by 234.5 nautical miles. We will stand by for conversation as it develops between CAP COM, Henry Hartsfield, and the crew aboard Skylab.

CC Skylab, Houston through Honeysuckle 9 minutes.

SC Roger.

CC Skylab, Houston for info. No response required. We got our gyro drifts squared away in the X and Y axes and we're turning off the third gyros on both those axes. Our configuration will be X1, X2 and Y1, Y3. And your panel configuration is ok.

SC That's very interesting, Houston. What seems to have been the problem? What solved it?

CC There never was a problem, Joe. The problem - you know we were out of solar inertial, so we never could get any good drift rate information on the gyros. Now that we've been in the solar inertial, we've really got the drift nailed down and got them corrected - compensated.

SC Okay.

CC Stowage workshop activation. Go ahead, workshop.

PAO Skylab Control, Houston. We've got about 3-1/2 minutes remaining on this pass over Honeysuckle. The next station to acquire will be Hawaii in approximately 14-1/2 minutes.

PAO Skylab Control, Houston. About 2 minutes remaining now on this pass over Honeysuckle. Very little conversation with the crew at this point. We'll stand by and continue to monitor.

CC Skylab, Houston. We're about 40 seconds from LUS. We'll be coming up on Hawaii at 57. And if it's convenient, we'd like to get a count on how many lights you have on in the workshop.

SC We'll try and have it for you by Hawaii.

CC Okay.

SC Seventeen. Over.

CC Understand 17.

CC PLT, Houston. Are most of them on low?

SC Without looking I'm not sure, Houston.

CC Okay, don't bother now.

PAO Skylab Control, Houston, at 16 hours 47 minutes Greenwich mean time. We've had loss of signal with Honeysuckle. The next station to acquire in approximately

SL-11 MC194/2

Time: 11:36 a.m. CDT, 148:16:36 GMT

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10 minutes will be Hawaii. Meanwhile, the Skylab crew is proceeding to finish off the activation process this morning to make the Skylab habitable and operational. Early this afternoon medical experiments M92, 93, and 171 will be activated and calibrated for use. The lower body negative pressure device, the vectorcardiogram system, metabolic analyzer, and the ergometer system are the principal equipment involved. Mainly, this activation calls for scientist pilot, Joe Kerwin, to turn knobs and watch gages, and activate the electronics for use. Later this afternoon experiments M171 and 92 will be put into operational use with Paul Weitz acting as a subject and Dr. Joe Kerwin as the observer. We presently show ambient cabin temperatures inside the workshop at approximately 88 degrees. We're 8-1/2 minutes away from acquisition with Hawaii and at 16 hours 48 minutes Greenwich mean time, this is Skylab Control, Houston.

END OF TAPE

SL-11 MC199/1

Time: 11:55 A.M. CDT, 140:16:55 GMT

5/20/73

P40 Skylab Control, Houston, at 16 hours 56 minutes Greenwich mean time. Standing by now for acquisition with Hawaii on the 202 revolution of the orbital workshop. The Skylab crew will answer questions from the press at Goldstone acquisition at approximately 12 minutes 30 seconds from this time and this will be carried into Houston via live television. Standing by now for Hawaii acquisition.

CC Skylab, Houston through Hawaii, 9 minutes.

SC Roger.

CC Skylab, Houston for the CDR.

SC Go ahead.

CC Okay, Pete. Just want to give you a rundown on what we are going to be doing at Goldstone. We have a list of questions that have been submitted by the newsmen here at Johnson and when we strike up at Goldstone there, I will just jump right in and start reading the questions verbatim and let you guys have at answering them.

SC Okay.

CC Skylab, Houston. Since it's lunch time now and you guys are starting to take a break here, we'd like to get a tag up on the activation.

SC Okay, Houston. The PLT is struggling with the portable fans, and he's not saying but he's getting there. The SPT finished camera activation. Still theading and I had some difficulties, which I will document on channel B.

CC Roger.

SC And the CDR is on the time line.

CC Roger. Copy.

SC As always.

SC It will be after lunch, Hank, before I get to (garble) that plenum bag stowage, and I think we will be pretty well on the time line.

CC Roger. Copy. Good point.

SC The film thing is very weird. The first couple of transporters would thread in various forms and then jam and we had a heck of a time getting it going. I'm not sure that it wasn't that the film was hot or been very hot. And that film vault is still one of the warmer things up there for some reason.

CC Roger. Copy.

SC We'll give you more specific details on B channel.

CC Skylab, Houston; 30 seconds from LOS. We'll be picking you up at Goldstone at 39 with TV.

SC Okay.

SL 12-00103/1

Time: 11:55 a.m. CDT, 148:16:55 CDT
5/28/73

PAG Skylab Control, Houston, at 17 hours
7 minutes Greenwich mean time. We've had loss of signal
with Hawaii. We should acquire with Goldstone in less
than 2 minutes at which time the questions from newsmen
will be asked of the Skylab crew and this will be coming
to us via live television.

END OF TAPE

SL-11 00196/1

Time: 12:07 p.m. CDT, 148:17:07 GMT

5/28/75

CC Skylab, Houston through Goldstone for -
Skylab, Houston through Goldstone for 6-1/2 minutes and we have
a picture.

SC

Okay.

CC

Okay. They - We'll leap right into it.
Here are the questions prepared by the newsmen in the order
submitted. For Commander Conrad. What EVA plans are you
considering now for freeing the stuck solar panel and when?

CDR

Well. Of course, I can't do anything without
consultation with the ground. And my understanding is, that
they're looking at some possible things that we can do. And/
or if we can't, why I'm sure that the other flight, with the
proper tools, now that we know exactly what's hanging it up,
can get that solar panel out, even if we don't. And seeing,
we're only 28 days, our fuel cells will last 18 or 19 days and
we can go on reduced power after EVA, which is day 26 for
deactivation, which is 27, 28 and 29. So, we really wouldn't
lose too much without it. However, I think that we could get
it out with the right tools. And we've talked to the ground
and they are looking at the various ways of getting it out
down in the tank right now.

CC

Roger. For Dr. Kerwin. Would you please
compare moving around in the workshop with the way you were
able to do it in the simulator? And do you have any sense of
up and down?

SPT

Okay. Time and again, in the last 2 days,
we've told each other that except for the view out window,
it's just like the one-g trainer. And in many ways that's true.
The training was excellent. You do have a sense of up and
down. And you can change it in 2 seconds wherever it's
convenient to you. If you go from one module into the other and
you're upside down, you say to your brain, "Brain, I want that
way to be up." And your brain says, "Okay, then that way is
up." And if you want to rotate 90 degrees and work that
way, your brain will follow you. I don't think it's vestibular
at all. I think it's strictly eyeballs and brain. And it's
ah - remarkably efficient.

CC

Roger. For Paul Weitz. You seem to be
having trouble with some of the food like the asparagus and
apricots. Would you explain why?

PLT

I don't have any trouble with it. The
menu is just more than I'm use to eating.

CC

Roger. For Commander Conrad. Based on an
early assessment, do you now feel you can complete a full
28-day mission, and carry out most of your experiments?

CDR

You betcha.

CC

Okay. If you think it's a good idea, or
can do it, we'd like to get the TV out the window, if not
we would like for you to explain some of the things in the ward-
room to us.

SL-11 NO-196/2

Time: 12:07 GMT, 14011707 GMT

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CC While you're doing that, for Dr. Kerwin.
Is the paraseal smoothing out as expected in the sunlight?

SPT You can't see it from in here. I'm sorry.

SC Hey, this is really pretty out the window.
I'm glad you asked about that. We're just passing over Puget Sound. It's a very clear day today. We can see Vancouver Island, I can see (garble) Island and (garble).

CC Okay. We see the the Pacific Coast, there.

CC For Paul Weitz. You have been working on the probe and drogue today. Have you found anything that might cause you a problem with undocking?

PLT We have not had a chance to get to the probe and drogue, yet.

CC For Dr. Kerwin. Why were you the only crew-member who didn't swear when the first docking attempt failed?

SPT I was too stupid to realize the serious implications of our problem.

CC This one's for anyone. Have you had any trouble with the toilet facilities?

SC No. We - It took us a while to figure out how you're really got to work our super-doooper system in the workshop. But that was a little mechanical problem. We got that squared away and we've had no problem.

CC For Commander Conrad. For listeners around the world, could you tell us some benefits that Skylab will bring to mankind?

CDR Well, the first thing that's obvious to me is that man can work up here. And suprisingly enough, in the workshop, we are doing what I consider a lot more physical task, that is exercising our muscles than I thought we would. Which has been one of the problems that I thought we might have. And as you might expect, I think, all of us are a little stiff from using muscles that we didn't expect to use, and that we don't use on the ground to hold ourselves in a proper way to use the tools and everything. There's no doubt in my mind that all the Earth resources type thing that we've talked about, are going to work. I've just been eyeballing out the window here at 237 nautical miles and we do pretty good with the Mark-1 eyeball. I think with our sensors, that we'll be able to do the tasks that we set out to do especially visual tracking and ah - Of course, we haven't been able to fire up the solar telescope yet, but I have understanding from the ground checkout, that it all appears to be in good order. And I am sure that we're going to bring good data back from that. So, I'm looking forward to a successful flight in Skylab of 28 days. I think we overcame our problem and I think we will improve on what we have if we get that other solar panel out. Right now we're

SL-11-MC-196/3

Time: 12:07 CDT, 148:1707 GMT

5/28/73

in good shape. I think it takes 28 days to complete the flight. I think the biggest thing though, is the fact that we've adapted so rapidly in this big tank. None of us have had any motion sickness and we've remarked to each other on many occasions how much it seems to be like the simulators except with the absence of gravity.

CC Rogar. Very good show, Pete. We're just about to LOS. If you've got any last few things you want to say here before we lose comm.

CDR Well, one nice thing I'd like to say, is we sure appreciate all the hard work everybody put into this thing. Because the vehicle is in excellent shape. It's clean as a whistle inside. Everything, so far, is working to what we expect. And as far as the flight control team, and the people that put it together, they did an outstanding job so the rest of it gets done.

CC On behalf of them, then, we thank you.

PAO Skylab Control, Houston. We had loss of signal with Goldstone. The next station to acquire will be Newfoundland back to back with MILA, then Bermuda.

END OF TAPE

SL-11 NO-197/1

Time: 12:18 CDT, 148:17:10 GMT

3/28/73

CC Skylab, Houston; through Bermuda for
9-1/2 minutes.

SC Got it.

CC Pete, have you had a chance to look over the
probe procedures yet and do you have any questions on it?

SC No. We haven't had a chance yet, Hank.
Are you guys in a big hurry for that?

CC Negative. In fact, Rusty's right here.
I'd like to let him say a few words about the procedure.

SC Okay.

SCHWEICKART CDR, if you can hear, let me just say a
couple of words. That procedure is a guideline - We'd like
you to use it as a guideline. It's an Alpha to Zulu pro-
cedure, it covers the whole works. But the first 16 steps
are more or less nominal checks on the probe. We expect to
see positive results picking up at about step 17. That's
where you'll be taking off the - the cap off the head of
the probe there, or beginning to loosen it and we feel that
it's a mechanical bind on that one capture latch. And I've
done this over in building 5. It's a relatively simple thing.
There's a couple of tricks, . . . One of the, the cap is
clocked uniquely on the probe head. So when you go to take it
off you want to make sure you mark the clocking on the cap
with one of the capture latches, so that you can put it back on
the same way. Over.

SC Okay. I suspicion that you're right, Rusty.
Because our first cursory examination indicated 2 capture latches
would make it and the third one wouldn't.

SCHWEICKART Right. Because the third one is being
held in there with a mechanical bind. It keeps the spider
from coming out and locking the other 2 out also. And we
expect that when you begin to loosen the cap or if you go inside
under the cap, and by the way, that's no sweat. You're not going
to lose any parts there. You'll immediately be able to see all
the potential surfaces. And once you free up that third capture
latch, we feel that the probe will function absolutely normal.

SC Okay. Do you have any idea why it happened.
Or, let me give my idea again on why it happened. I noticed that
when we docked, that it was a very gentle docking. I used the
4/10ths of a foot per second. I believe I was very close to that,
maybe one-half a foot per second. On our third soft dock. And it
was quite nominal. It was right down in - fairly well down
the slot. There was very little spacecraft oscillation.
However, during the night and the succeeding day, I noticed
that from my window the spacecraft bent down and to my left. It
parked in an extremely aftmetric attitude and stayed there.
Now, I'm not exactly sure why it did that. I don't know

BL-11 NO-197/2

Time: 12:10 CDT, 140:17:10 GMT

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whether you maneuvered the vehicle and that's where it wound up, or what. But when we first docked and went into the night side we were pretty well lined up. But when we came out on the day side, my vehicle had moved down and left, with respect to the docking target. And it stayed there, and I remarked a couple times to the guys, if we had to be absolutely in the limit, because it was so far over. Now that may have had something to do with it, I don't know.

SCHWEICKART Okay, Pete. We've got people taking a look at that. We noted that comment when you made it. I think we're going to need your observations on the probe before we can carry much further on that. Just off hand, it doesn't see that there are any forces that can be generated. If you drift over to the edge that would cause a problem. But we're also looking at that.

SC We didn't feel any. And the other thing of course, is I couldn't have been more surprised after having gotten a perfectly normal soft dock the first time.

SC Now I, - we have examined the probe - Are you there?

SCHWEICKART Yes.

SC We have examined the probe externally and we can see very few marks on the head itself, more on the capture latches, for that matter. But we'll take your procedure, hopefully this afternoon, if I get through - get ahead here a little bit. I'll go tear into the probe.

SCHWEICKART Okay. We are in no hurry and, again, step 17 is about where we expect you see things. And use the rest of it loosely as a guideline. Pete, one further question, how about observations on the drogue? Are there any unique marks on the drogue?

SC Well, there's one great bit dent in the side of it where in one of the final attempts, I was really motoring in there to make sure I had enough velocity. But around where the center of the drogue is, no.

SC Other than the normal scratches that you see - little scratches from the capture latches?

CC Roger. Understand.

SC And Joe says to start your node.

CC Okay. When you take the plunger out of the middle, if you're going to take the cap all the way off, be aware that that's a little mushroom cap with a spring underneath it. And it'll pop out a little bit, so you want to hold it. It's not very much. It's only about 3 pounds so, no sweat.

SC

Yeah. I know the one you're talking about.
Okay.

CC

SL-11 NC-197/3
Time: 12:18 CDT, 148:17:GMT
5/28/73

CC Skylab, Houston; for the SPT.

SC Go ahead.

CC Roger. We concur with your recommendations on the protocol for M093. On M171, however, we would prefer to stick to the flight protocol. However, of course, if you're - in your judgment you start exceeding some of the limits on the spot, then you're clear to stop.

SC Okay. And we will. I - I didn't expect that the heart rates and so forth are gonna be biased to the heat storage side, because to the hot walls we've got here, we're really not able to radiate heat very effectively. Now I don't know what's going to happen when we raise the metabolic rate. But we'll give it a go.

CC Roger. Thank you.

CC And also in conjunction with the biomed activation, we would like to get a live TV pass at 18:48. And if you get a chance there, we'd like for you to set up a camera on TV setup number 8 Charlie. That's page 1-8 of the TV ops book. And turn on the camera just before the 18:48 pass over Goldstone.

SC Houston. Is it okay if I just point the camera in the general direction and turn it on. I don't want to get further behind on this thing. I'd like to get this first run in. And things take a lot longer the first time you go.

CC Roger. That's perfectable acceptable to us.

SC Very good.

CC Skylab, Houston. We're about 40 seconds from LOS; Canaries at 31.

PAO Skylab Control, Houston. We've had LOS with Berauda. Standing by now for acquisition with Canary.

SC Skylab, Houston; through Canary and Ascension for about 16 minutes and we'll be dumping the tape recorder over Ascension at about 37.

SC Okay.

END OF TAPE

SL-11 NC198/1

Time: 12:31 p.m. CDT, 148:17:31 GMT

5/28/73

SC Okay. Houston. There isn't any way we can give you the MUA. We haven't been back there since reveille. Guess what I just thought. How'd the command module doing? It's still there, isn't it?

CC

Roger, still there and looking good.

PAO

Skylab Control, Houston; at 17 hours 34 minutes Greenwich mean time. We have a long pass, combination of Canary and Ascension which gives us approximately 14 minutes until we have loss of signal with the Skylab space station. At 17 hours 34 minutes, continuing to monitor this is Skylab Control, Houston.

PAO

Skylab Control, Houston. We have approximately 6 minutes and 30 seconds remaining on this pass over Ascension.

CC

Skylab, Houston. In reference to the M151 that goes with the biomed, we're recommending that you have seven lights in the high position over the experiment subject area. However, if it feasible we would like to keep the total number of lights you have on in the workshop constant or near abouts constant due to power considerations. You can turn some of them off in the upper areas, or other areas. I might recommend to make it easier you use the switches on panel 613 for that, then all you have to do is throw them back on and you'd be back to original configuration.

SC

Roger that.

SC

What number are you looking for - total number of lights/ And you're right, it's inconvenient to go around from light to light, so we have been controlling them from 613. Now assuming they are all on high, how many lights would you like to see on? We've been running 10 to 13. I think once we've finished activation, we'll get by with about 10.

CC

Okay. I guess what we're considering is about what you have now Paul. We were not - the point we were trying to make was that it was possible when you turn on these lights with the M151 we didn't want to increase the electrical load appreciably.

SC

Oh, yeah, we understand that. We just wondered if maybe we been having too many lights on, more than you'd like or what. That's all.

SC

Hey, Hank, CDR.

CC

Go ahead.

SC

How about sometime getting somebody to give me a status report on what you're think about that SAS panel. And I been doing a little thinking myself, so I'd like to get together sometime when somebody has got some plans about what they're going to do with it.

CC

Okay, we'll keep that in mind, Pete. Soon as we get something we'll get with you.

SL-11 MC198/2
Time: 12:31 p.m. CDT, 148:17:31 GMT
5/28/79

SC

Okay.

CC

Skylab, Houston, going back to our light situation. What we been using as our baseline down here to sort of program our power is 15 lights in the workshop on low. If you're comfortable with some other configuration, you say you got about 12 on now in high we'd like to - to know so we can, you know, update our baseline

SC

Okay, that's a pretty good number, Hank. Why don't you base go on 12 on high.

CC

Okay, we'll work from that basis then.

PAO

We've been listening to CAP COM, Henry Hartsfield, talk with Paul Weitz about the lighting for the filming of M151. That's a time and motion study designed to evaluate the metabolic experiment M171, which is scheduled to start later this afternoon.

CC

Skylab, Houston, we're about 1 minute to LOS. You're looking good going over the hill. Carnarvon at 10.

PAO

Skylab Control, Houston, at 17 hours 48 minutes ground elapsed time. We've had acquisition - had loss of signal now with Ascension. The next station to acquire will be Carnarvon in approximately 22 minutes. During that relatively long pass over Canary and Ascension we received definite confirmation from the Skylab crew that they had in fact spent the night in the multiple docking adapter versus the command module. Jokingly, they asked if the command module was still there and to the status and were assured by CAP COM Hartsfield that the command module was in good shape. Skylab crew Pete Conrad, Paul Weitz, and Joe Kerwin have essentially completed their orbital workshop activation. Shortly this afternoon they will press on to activate the medical experiments M92, M93, and 171, these being activated and calibrated for use. The lower body and negative pressure device, the vectorcardiogram system, the metabolic analyzer, and the ergometer system are the principal pieces of equipment that are involved. And mainly this activation calls for Kerwin to turn knobs and watch gages and make the electronics active for operational use. Later in the afternoon M171 and M192 will be put into use with Paul Weitz as the subject, and Dr. Joe Kerwin as the observer. We're about 20 minutes away now from acquisition over Carnarvon and at 17 hours 50 minutes Greenwich mean time this is Skylab Control, Houston.

END OF TAPE

SL-II NC-199/1
Time: 1:08 p.m. CDT, 148:18:00 GMT
5/28/73

CC (Garble)
PAO Skylab Control, Houston; at 18 hours
9 minutes Greenwich mean time. Standing by now for acquisition
through Carnarvon with Skylab now on its 203rd revolution of
the orbital workshop. We'll stand by and monitor as CAP COM,
Henry Hartsfield, places his call to the crew aboard the
space station.

CC Skylab, Houston through Carnarvon for
8-1/2 minutes.

SC (Garble)
PAO Skylab Control, Houston. We have approxi-
mately 3-1/2 minutes remaining on this pass over Carnarvon.
The only contact with the crew thus far has been a callup
from CAP COM, Henry Hartsfield, which stated we had them under
acquisition and a brief acknowledgment from Pilot Paul Weitz.
We'll stand by and continue to monitor for the balance of the
pass. This Skylab Control, Houston.

CC Skylab, Houston. One minute to LOS.
Guam at 25.

SC Say, Hank, did I remember you saying
we're going to have a trim burn today?

CC That's affirmative. It'll come after
dinner tonight, Pete. A little after 01:00.

SC A little after 01:00. Okay.

SC Commander Weitz has just entered the
waste management compartment to see if our new equipment is
worth - I mean, that's the most serious test today.

CC Roger. Copy.

PAO Skylab Control, Houston; at 18 hours
19 minutes Greenwich mean time. We've had loss of signal
through Carnarvon. We should be acquiring Skylab through
Guam in approximately 5 minutes.

END OF TAPE

SL-11 NC-200/1

Time: 1:23 p.m. CDT, 148:18:23 GMT
5/28/73

PAO Skylab Control, Houston; at 18 hours 24 minutes Greenwich mean time. Coming up now on acquisition with Skylab through Guam. This will be approximately a 6-minute pass. We'll stand by and pick up conversation with the crew aboard Skylab as it develops.

CC Skylab, Houston through Guam, 6 minutes.

SC Hi, Houston through Guam. As soon as we come out in the day side can I inhibit momentum for this BMF decal?

CC Okay, stand by. I'll get an answer on that.

SC Okay. Give me a time to do it.

SC Houston, SPT.

CC Go ahead.

SC Rate of the temperature in the food locker 562 is 99-1/2 degrees. And what stations do you want this - the TV turned on over? Or shall I just leave it run?

CC We'd like to get it turned on at about 18 - or just prior to 18:48. Say about 18:45. That's about 20 minutes from now.

SC I'll try and remember. If I don't, holler.

CC Okay. You can turn it on now, if you'd like.

SC No, it is on now.

CC SPT, Houston. Telemetry is showing the camera is getting pretty hot now. I guess it'd be best to turn it off now and turn it back on, and we'll give you a call to remind you.

SC Okay.

CC Skylab, Houston. For the CDR, in answer to your question on the momentum dump. You can inhibit from now until 19:20. That's about an hour from now.

SC Okay, Houston. The CDR says he'll leave it enabled and will avoid GR dump when he's doing cal.

CC Roger. Copy.

CC Skylab, Houston. Going LOS. Guam at - check correction - Hawaii at 39. Make it Goldstone at 48. We gave up Hawaii.

PAO Skylab Control, Houston; at 18 hours 32 minutes Greenwich mean time. We've just had loss of signal through Guam. The next station where we expect to have voice contact with the crew will be Goldstone, and that being approximately 16 minutes from this time. Hawaii is the next station to acquire. However, it's only a 36 second pass and we expect no voice contact. During this upcoming stateside pass, we expect that Science Pilot, Joe Kerwin, will have started to activate the medical experiments, M92, M93, and M171. We're at 18 hours 33 minutes Greenwich mean time, and this is Skylab Control, Houston.

END OF TAPE

SL-11 HQ-201/1
Time: 13:47 CDT, 148:18:47 GMT
5/28/73

PAO Skylab Control, Houston; at 18 hours
47 minutes Greenwich mean time. Standing by now for acquisition with Skylab through Goldstone. Skylab now on its 203rd revolution.

CC Skylab, Houston; through Goldstone for
6 minutes.

SC Rog. Houston.

CC And I'd like to remind you to get the TV
on if you haven't got it on already.

SC It's on.

SC Hey, Hank. The specimen mass measuring
device in the head doesn't work. Now we don't have time to
pursue it but you turn it on and none of the lights come on and
you push your reset button on and nothing happens in either
the temp or the mass modes. How about having somebody research
this and see if we got any spare parts on board or suggest a
troubleshooting routine, if you would, please.

CC Okay. Will do.

SC It checked out all right yesterday.

CC Skylab, Houston. For the CDR.

SC Go ahead Houston. He's listening.

CC Okay. Thought he might be interested to
know that the Indy race is in a hold for rain. However,
the Sun has come out and it looks like they might get a race
off at about 15 past the hour. We show you'll be going pretty
close to Indy at about 57. Why don't you take a look at the
clouds. If it looks good, drop the flag on them.

CDR Very good, Henry. Thank you for the
information. If I don't get a chance to see it, then yall
pass my word up there that I wish them all the best of luck
in the world in the race - all my friends that are
driving.

CC Roger. Will do.

SC Skylab, Houston. We're about 30 seconds
from LOS. We'll be picking up at Texas at 55.

SC Roger.

PAO Skylab Control, Houston; 18 hours
44 minutes Greenwich mean time. The SMMD referred to as the
specimen mass measuring device, the weighing device for use
in the weightless environment in Skylab - -

PAO Skylab Control, Houston; standing by now
for acquisition through Texas.

CC Skylab, Houston. We're back with you for
a 12minute stateside and we'll be dumping the recorder
at Bermuda. That'll be coming up at about 56, 57.

SC Fine.

SC There a few holes down there, Henry. I'm
not sure I can see it or not. It looks like we're a little

SL-11 MC-301/2

Time: 13:47 CDT, 148:18:47 GMT

5/28/73

north of the track.

CC

Roger. Copy.

SC

I've got us right over the middle of Lake Michigan and we just passed the tip of Superior.

PAO

That's Pete Conrad advising Henry Hartfield that they appear to be somewhat north of Indianapolis.

CC

You might go pretty close to it.

SC

I'll tell you this 37 nautical is great. We're right over the mouth of the Delaware River and we can see clear past the Keys.

CC

Roger.

SC

You might decide tomorrow or the next day. Hank, you want to have the weather man whip us up some good weather. It was kind of cloudy there from Chicago on down. And we'll get some pictures up this way. We've never had any up this way before.

CC

Roger. We're going to get the EREP cranked up here in a few days.

SC

What's our elevation angle at Bermuda?

CC

Bermuda maximum elevation is 65.8.

SC

And where's it gonna be? Oh, never mind,

I see it.

CC

Okay. You're at 30 degrees from Bermuda now - 30 degrees elevation.

SC

Yeah, I know. I got it loud and clear.

CC

Paul. We'd like to verify your comments on the SMMD, just to make sure we got it straight. As I understand it, the circuit breaker was in. You could not get any lights at any position of the switch and the reset would not work. It acts just like it has no power to it, is that correct?

SC

That's right, Hank. This is SPT. I activated it last night. It was fine. Paul remarked, when he went in just now that the mass off temp-switch was in MASS, which indicates I may have left it in MASS although, I don't remember doing so. The one in the wardroom you stow, okay and that's all the information we've got.

END OF TAPE

SL-11 00202/1
Time: 14:01 p.m. CDT, 148:19:01 CWT
5/28/73

SC - - we left it in there, though I don't remember doing so. The one in the wardrobe is still okay. And that's all the information we've got.

CC Roger, copy. Thank you.

CC Skylab, Houston, one minute to LOS.

Ascension at 16.

SC Rog, Hank, and let me know if they get the race off and keep me posted, will you?

CC Okay. Will do.

PAO Skylab Control, Houston, at 19 hours 9 minutes Greenwich mean time. We've had loss of signal with Bertsida. The next station to acquire is Ascension in approximately 7 minutes. The piece of equipment that may have failed is the specimen mass measurement unit or device. There are two units aboard. The one appearing to have failed is the waste management compartment. This particular situation is being studied and analyzed in the bio-medical backrooms at this time. We're at 19 hours 9 minutes Greenwich mean time. This is Skylab Control, Houston.

END OF TAPE

SL-11 NO-203/1

Time: 2:15 p.m. CDT, 148:19:15 GMT
3/20/73

PAO Skylab Control, Houston; at 19 hours
13 minutes Greenwich mean time. Standing by now less than
1 minute away from acquisition with Skylab through Ascension.
CC Skylab, Houston through Ascension, 6 minutes.
SC Roger, Houston.
SC Hello, Henry. Do you read?
CC Roger. How's it going?
SC Okay. Slow. We're getting there, though.
Hey, I got something. To me, on #149 box which I'm in the process
of moving now, it's got two distinctly different types of tieowns.
One - two of them are on opposite corners - diagonal corners that
are just bolted into the grid; the other two are some kind of clip-
shaped tieown restraint. Those clipped - Those clipped shaped
things show, what to me appear to be evidence, of a pretty good
upward load on the box, which means that half moving load on the
stage. Now, I'm saving those in case you want us to take pictures
of them to show them to you on TV or throw them away - whatever
you want -
CC Okay. Stand by and I'll get an answer
on that.
SC Okay, no rush. I just keep them warm
in my pocket.
CC And I'd also like to verify we got the
TV off.
SC Verified.
SC Say, Houston; CDR.
CC Go ahead.
SC On this calibration, I am not able to
use this correct procedure because we don't have an 5020 film
container with us. Do we?
CC Roger. Stand by.
CC CDR, Houston. The word is to omit the
5027 film container and press on.
SC Okay, Hank. That's what I figured.
We'll press on without it.
CC Okay, and we're about 10 seconds from
LOS. We'll be coming up on Carnarvon at 47.
PAO Skylab Control, Houston; at 19 hours
22 minutes Greenwich mean time. We've had loss of signal
with Skylab through Ascension. The next station to acquire
will be Carnarvon, some 24 minutes from this time. Meanwhile,
in the Mission Control Center, toward the later part of that
pass, the ADAM flight controller reported that they had suc-
cessfully concluded the ground commanding and checkout of the
Apollo telescope mount at Greenwich mean time of 19 hours
19 minutes 19 seconds. This is Skylab Control, Houston.

END OF TAPE

SL-11 MC204/1

Time: 14:43 p.m. CDT, 148:19:43 GMT

9/28/79

PAD This is Skylab Control, 19:43 Greenwich mean time. Less than a minute now before acquisition through the Carnarvon, Australia tracking station midway through Skylab's space station revolution number 204. Following Carnarvon there'll be a slight break of about 3 minutes before acquiring again at Guam. A circuit will be left up through both these stations. We now have data from the space station. Let's listen for a conversation on the air ground.

CC Skylab, Houston, through Carnarvon for 10 minutes.

SC Hi, Henry. Is Mister BMMD around there?

CC He sure is. And he's listening.

SC Okay, well, tell tell him I win my bet.

There isn't any way that those shoulder straps will hold those two 509 batteries and that P003 in there without them rattling all over the place. I been screwing with it for an hour and without wedging it with some mosite blocks and the straps, I'm not gonna get it done. Now, he's got two choices; he can - I can bring home the mosite blocks and the straps and go ahead with the two batteries or I can skip the whole thing. I've already invested an hour trying to get this one data point.

CC He would prefer you go ahead and put the mosites in and bring them home.

SC Okay. Have somebody write it down on the storage list. We'll get a bag and we'll tell you what we used and where we put it so you can remind us at the end of this thing. And I don't think it's worth the effort. The rest of them worked slicker than glass and was very repeatable, but that one data was miserable.

CC Okay, and whatever you use you want to be sure you use it on the subsequent calcs.

SC Understand.

CC Skylab, for info the ATM ground checkout is complete. All is okay. We're going to command the EPC down and go back to solar inertial to conserve power.

SC Roger.

CC And for Paul, in regard to those straps, why don't you hang on to them and the next time we got some TV you can give us a closeup of them.

SC Say again, Hank. We didn't hear you.

CC Roger. Paul reported that a couple of the straps on the S149 showed signs of severe strain and we'd like to have him hang on to those; the next time we have some TV he can give us a closeup of them.

SC Okay, when's the next TV?

SL-11 MC204/2

Time: 14:45 p.m. CDT, 148:19:45 GMT

9/28/73

CC I'm not sure at this point. Probably
will be sometime tomorrow I think.

SC

Okay.

CC Skylab, for the CDR. We just got the
word that they're rolling the cars out to the starting
line now.

SC

Okay. Do we come anywhere near there
on the next pass?

CC

Looks like you're going right over the
center of the U.S. on this next pass, Pete. Looks like you
might be about 6 to 800 miles southwest at closest approach.

SC

Okay.

CC

Skylab, Houston. In regard to the
SMMD problem, we're going to let you have your druthers
on that. I guess if we had a preference down here, we would
say weigh everything in the wardroom. I guess we'd be
a little reluctant since we got it working to take a chance
on damaging the electronics if we change that out over to
the WHC.

SC

Okay.

SC

We don't have any spare electronics
onboard, then. Is that right?

CC

No, that's affirmative, no spares.

END OF TAPE

SL-11 NC-205/1

Time: 14:57 GMT, 148:19:57 GMT

9/28/73

CC Skylab, Houston, through Guam for 10 minutes.
PLT Hey, Hank, this is the PLT. I got a ques-
tion on the sail triped.

CC

Go ahead.

PLT

Okay. The one we're doing just for ex-
periment of course is the one we brought up in the command
module. Now on the - this big bolt that holds the leg to the
floor - as it's now configured there's a gap between the sleeve
and the shank of the bolt. Is that the correct way for instal-
lation or should it be turned over? I forgot.

CC

Okay. That sleeve - that little thing
there should be turned over such that you make the minimum
number of turns putting into the floor.

PLT

So you make less turns screwing it in.
Okay, so I guess it's configured for Houston. Thank you.

CC

CDR, Houston. I just got the word that the
pace lap has started - Al Warden in the pace car. And they're
going to run a short race. The winner will be the leader at
the end of 100 laps.

CDR

All right. Okay, Hank. Thank you.

CDR

What - what are they running in the
darkness? I've no idea what kind it is.

CC

Okay, I just got the word the race has
started.

CDR

Okay.

END OF TAPE

SL-11 NC206/1

Time: 11:06 p.m. CDT, 100:20:00 GMT

3/28/73

CC Skylab, Houston; about 30 seconds from
LOS. Goldstone at 23.
PAO This is Skylab Control, 20:10 Greenwich
mean time, 14 minutes from Goldstone for a fairly solid
stateside pass through Goldstone, Texas, and Mills, and the
ragged edge of Bermuda for the final time today. In fact,
Bermuda is only a 4-degree pass and yesterday about this
time, Bermuda was released. We'll be back again live for
the upcoming stateside pass. And at 20:11 Greenwich mean
time, this is Skylab Control.

END OF TAPE

SL-11-MC107/1

Time: 13:24 p.m. CDT, 148:20:24 GMT

5/28/73

P40 This is Skylab Control, 20:24 Greenwich mean time. 43 seconds from acquisition through Coldstone. Here in the Control Center, another aspect of power usage has seemed to surface. It seems that the food trays for heating the Skylab canned food in the wardroom each use 150 watts of electrical power when all of the cavities are turned on, the heating cavities. So now as a part of each day's Flight Plan., it appears that the crewmen will be rationed, as it were, to how many cavities they turn on at each meal. On more or less a rotational basis. And this is particularly true when other devices and experiments are turned on that require electrical power. We should have AOS now for the next 16-1/2 minutes. 20:25 and standing by, this is Skylab Control.

END OF TAPE

SL-11 NC200/1

Time: 19:32 p.m. CDT, 148:20:32 GMT

9/28/73

SC Hey, we got a visual on you, Hank.
CC Is it clear outside?
SC It looks like it.
CC CDR, you ought to have a Little Rock just
north of you there.
SC We got Houston loud and clear. Man,
you can really see it today.
SC Watched the Mississippi and all the
flooding along it.
SC We got a good shot of the Cape from
here, too. Can see all the pads.
CC Roger. Can you tell whether they
brought your LUT back out to the VAB yet?
SC Not quite. Need to put on my binocs.
CC Skylab, Houston. We've got about 4 minutes
left on this pass. We'd appreciate a progress report some-
time between now and LOS.
SC The CDR is just finishing up the BMMD.
SPT The SPT is on page 3-57.
CC Roger. Copy.
SC The PLT is in the midst of PCU ullage (garble
config. I'm almost done with yesterday's work.
CC Roger. Copy, and have the plenum
bags been stowed yet?
SC The plenum bags are stowed; yes.
CC Good show.
SC Very neatly down in the bottom where
they belong. Three of them were still - we'll hold this one - one
for a little while. It's only about 2/3s full and we're coming
up with some more gear out of the medical stuff and every-
thing to get rid of. We'll whip that down there a little
later.
CC Okay.
CC Skylab, Houston, we're about 15 seconds
to LOS. Be picking you up at Vanguard for a short pass
at 53.
PAO This is Skylab Control, 20:43 Greenwich
mean time. Skylab space station just passed out of range
of the Mila tracking station. Now crossing the northern
coast of the South American continent; 9-1/2 minutes to
a very short pass along the northeastern edge of the
tracking ship Vanguard acquisition circle. It is likely
that we'll barely have time to even raise the crew before
we have loss of signal. 20:43 Greenwich mean time returning
in 9 minutes, this is Skylab Control.

END OF TAPE

SL-11 HCN09/1

Time: 20:52:32 GMT CDT 148:20:52 GMT

3/28/73

PAO This is Skylab Control, 20:52 Greenwich mean time. About 10 seconds away from acquisition through the tracking ship, Vanguard. There may not be any conversation over this very brief pass. Extremely low elevation angle. Total pass time 4 minutes, but we'll monitor it anyhow. Standing by, this is Skylab Control.

CC Skylab, Houston through Vanguard for 3-1/2 minutes.

CC Skylab, Houston; 1 minute to LOS. Goldstone at 02.

PAO This is Skylab Control; 20:58 Greenwich mean time. Eventhough CAP COM, Hank Hartsfield, called the crew a couple of times to remind them we were still here, he got no response over the Vanguard from the Skylab crew. An hour and 3 minutes until acquisition by Goldstone on the next stateside pass. We'll miss Carnarvon and Guam this next rev. And at 20:58 Greenwich time, this is Skylab Control.

END OF TAPE

SL-11 MO-211/1
Time: 17:01 p.m. CDT, 148:22:01 CRT
5/28/73

PAO This is Skylab Control, 22:01 Greenwich mean time 40 seconds out of Goldstone on the next to the last stateside pass of the evening. We're now estimating a Change-of-shift briefing at the Houston news center no earlier than 6:30 p.m. central daylight time, probably more like 7:00 p.m. Participants will be off-coming Flight Director Neil Hutchinson and Flight Surgeon Doctor Royce Hawkins. Repeat: press conference estimate between 6:30 and 7:00 Houston news room. Participants Neil Hutchinson and Doctor Royce Hawkins.

CC (Garble) 14-1/2 minutes.

CC Skylab, Houston. It's been a little over an hour since our last contact. If it's convenient I'd like to get a progress report.

CDR Roger, Houston. The CDR has finished T003 and I'm about to add to the ATM and accomplish all those tasks. The SPT and PLT are in the process of putting on the biomed now for the 92-171. The MA is activated - MO-92 LBNP is activated and they'll be in experiment operations now very shortly.

CC Roger. Copy.

CDR Have you had a progress report on the Indy race for me?

CC Roger. They got off to a bad start and while they were trying to get sorted out to start again it started raining, so they scrubbed until 09:00 tomorrow morning.

CDR To 09:00 tomorrow morning. Okay. Thank you.

CDR Do you hear that good music in the background?

CC We hear that music in the background.
(Music)

PLT Hey, help. He's driving us crazy.

CC Skylab, Houston. We're about 1 minute from LOS. We'll be coming up on Vanguard at 27:00 and we plan to dump the data recorder there.

CDR Okay.

PAO This is Skylab Control. We've had loss of signal from the Texas station on rev - at the beginning of rev 206. Vanguard in 10 minutes. Sounds like Pete Conrad has been playing some of his country music cassette tapes to some amount of consternation to his crewmates. Conrad reported during that pass that he had completed one run of the T-003 experiment which is called inflight aerosol analysis. This device measures particle composition - different sizes and distributions around inside the space station to assess the - any potential health hazards or sources - whether or not the air is being distributed properly within the space station - filtered and so on. He also reported that Weitz and Kerwin had begun a run of T-171, which is the metabolic activity.

SL-11 MC-211/2

Time: 17:01 p.m. CDT, 148:22:01 GMT

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experiment. Scrub that - M171 which uses the bicycle ergometer with all kinds of plumbing and electronic gadgets attached to the person mounted up on the ergometer - measures various outputs of the human subject - blood pressure, heart rate - against a measured workload. Eight minutes out of Vanguard - back up at that time at 22:18 Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-212/1

Time: 17:26 CDT 148:22:26 CRT

5/28/73

PAO This is Skylab Control 22:26 a.m.t. about 5 seconds away from acquisition at the Vanguard tracking ship. We'll monitor that pass lasting a total of 9-1/2 minutes. Standing by, this is Skylab Control.

CC Skylab, Houston, through Vanguard for 9 minutes.

CDR You know I found out what happened on that 13 message. I got the message last night and I did the quiescent configuration of it and it also was (garble) but the (garble) down at the bottom of it, and I got down there and I didn't understand them and when I went back after getting your other message just now and reconstructed what I had, why it was there. All the messages today have been good.

CC Okay, I'll send a message that today are good. We just sent one up on tomorrow's flight plan. And we got a reject and invalid character. So we'd like for you to disregard that one. And we are going to ship you another one.

CDR Well, I have one in my hand and then there was another flight plan just behind it which I didn't mess with. Are you saying the one that I have in my hand is no good?

CDR I'll give you the message number, 0501A1, 068 flight plan for 05/149.

CC Okay, that one is good. The one that might be bad is the second page which is 0501A2.

CDR Okay, that's still in the teleprinter.

CDR All right. Houston, are you there?

CC Roger, go ahead.

CDR Just talking to Paul. In answer to your question on message 0416A about the mol sieve bakeout heaters, just before or just after he turned the timer on he turned on the heater quickly to take a look if the mol sieve temperature was (garble) So, what you saw was just turning on the mol sieve heaters to read the mol sieve temperature.

CC Roger, copy.

CC EGIL is breathing easier now.

CDR Okay.

CC I guess we're convinced now that the timer A is okay. We just hit it at a place when it wasn't ready to cycle. But we want to stay in the configuration we're in now.

CDR Yeah, I vaguely remember where they changed the wiring or did something. Normally, when you brought on the primary timer, it always cycled, but now the random thing in (garble)

CC Roger, that's affirmative.

SL-12 MC-212/2
Time: 17126 CDT 148:22:26 CDT
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SPT

Hello, SPT.

CC

Go ahead.

SPT

Just for your information, we're about to start MO92. And the subject is not isolated from the lower body negative pressure device unless he really sucks in every inch of skin, legs, arms, belly, and everything else. (garble) this is good, and we have no choice but to press on, it's an old problem. I just thought I'd let you know.

CC

Roger, copy. And we're about 30 seconds from LOS. We'll be having a very low angle pass at Hawaii at 37. If we miss that one, we'll get you at Goldstone at 42.

PAO

This is Skylab Control. Loss of signal through the tracking ship Vanguard. Fifty-nine minutes to Hawaii, an extremely low angle pass, 1.4 degrees. Unlikely there will be any conversation there. But, we'll come up at that time, bridge across to Goldstone, which is not much higher elevation angle of 6 degrees. Only 3-1/2 minutes pass - the last Goldstone pass of the evening. Upcoming this evening is the so-called trim burn to move the space station back into repeating groundtrack. This burn will be accomplished with the service module reaction control system quads A and C flying in a plus-X direction. Burn ignition time is 8:07:36, 8:07:36 central daylight time. Total velocity change 2.1, 2.1 feet per second. Burn time 1 minute 3 seconds. To repeat an earlier estimate on a change of shift press conference, no earlier than 6:30 p.m. central daylight time in the Houston News Room. More like 7:00 o'clock. Participants Neil Hutchinson, the off coming Flight Director, and Dr. Royce Hawkins, the Flight Surgeon - one of the flight surgeons. Fifty-seven minutes from Hawaii. And at 22 hours 39 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-11 MC-213/1
Time: 18:26 CDT, 148:23:26 GET
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PAO This is Skylab Control, 23:26 Greenwich mean time. The change-of-shift press conference will take place at 6:30 or shortly thereafter, inasmuch as Flight Director Neil Hutchinson is preparing now to leave the Control Room and head for the Houston News Center. With him will be one of the Flight Surgeons, Dr. Royce Hawkins. We're 10 minutes out from acquisition at Hawaii followed by a brief gap across the southwestern edge of Goldstone and on down to tracking ship Vanguard. These passes will be taped and played back on a delayed basis after the press conference is completed. At 23:27 G.m.t., Skylab Control.

END OF TAPE

SL-11 NC-214/1

Time: 19:23 CDT 149:00:23 CDT
5/28/73

PAO This is Skylab Control, 00:25 Greenwich mean time. Forty-seven minutes out of Hawaii. Start of revolution number 207. Spacecraft or Skylab cluster off the Cape of Good Hope, South Africa. Prior to the time that Flight Director Neil Hutchinson left the Control Room in route to his press conference, he gave his team a pep talk here for activation of the Skylab space station over the last 3 days. "I think you guys did splendid" was one of his comments. He complimented them highly on a lot of hard work in making the best out of a situation, which earlier might have looked rather gray. During the time of the just completed press conference, we've had three station passes with Skylab: Hawaii, Goldstone, and Vanguard, for a total of 11 minutes of tape. This 's all compressed in playback to be more or less continuous. So, at this time, we will play back these three station passes and we'll be caught up with Hawaii coming up some 45 minutes from now. Roll tape.

CC Hello, Skylab, Houston. We've got you in Hawaii for 1 minute.

CDR What did you say, Hawaii for 1 minute, Dick?

CC That's affirm, Pete.

CDR What' our next station?

CC It's Goldstone and it's just following this pass at 23:42, about 5 minutes.

CDR Okay, I need to talk to you about a couple of things there.

CC Okay.

CC And CDR, Houston. The only note that I had for you guys was later on we're going to be doing a trim burn this evening and we're going to have a pad up for you at Goldstone. Be advised we intend to command the burn into EXPERIMENT POINTING mode at this upcoming Goldstone pass. And so for the unattended OPS, after the trim burn, just a reminder to go back to EXPERIMENT POINTING mode.

CDR Okay.

CC And we'll see you at Goldstone.

CDR All right.

CC Skylab, Houston. We're AOS at Goldstone for the next 4 minutes and go ahead, Pete.

CDR Okay, Dick. I was changing out the ATM coolant loop filter and the outlet QD stuck on when I took off, when I was changing the filter. So I lost 4 or 5 ounces of fluid out of it before I could get it back on the connect or again, the QD stuck open. But I finally did get it changed out. And then in checking it, I noticed that it took a long time for the PUMP DELTA P light to go out. I guess maybe there

SL-II MC-214/2

Time: 19:25 CDT 149:00:25 CDT

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was pressure in the line and we just lost the pressure and I presume it took a while for the accumulator to get it on there. But I ran 60 Uncle and completed 60 Tango, so they're both done.

CC

Okay understand. We copy.

CDR

I'm about to eat. I've caught up and my dinner is cooked. Joe and Paul are a little bit behind. Paul is just in the middle of riding the bicycle right now. And why don't you go ahead and get the trim burn in there.

CC

Pete, it's coming up on the teleprinter this pass.

CDR

Okay.

CC

And in the event that we don't get it up or something though, I'll have the numbers for you here shortly.

CDR

Did you want to do it the page of activation?

CC

Sorry Pete, so much squeal on that speaker box, I couldn't copy. Say again.

CDR

Roger. Do you want to reference the page in the activation checklist?

CC

Roger. The trim burn, if you look on page 3-62, and the tape time is day 149:01:07:36. And the burn time is 63 seconds, 1 minute plus 3 seconds. It's going to be a 2-jet burn, quads Alfa and Charlie plus X, using the PSM. And the Delta V is 2.1 feet per second.

CDR

Okay, I'm sorry I was (garble)

CC

Roger, Pete. We've got about a minute to LOS and I think the information is in the teleprinter now. If not, I can give it to you at Vanguard. We're going to be at the Vanguard right on the hour. And be advised, we are going to do an airlock module, I'm sorry, a data tape recorder dump at Vanguard.

CDR

Okay.

CC

Skylab, Houston. We're AOS at Vanguard for 10 minutes.

PLT

Roger, Houston.

CC

And Pete, I'm assuming you got that information on the trim burn on the pad.

CDR

Yes.

CC

Okay. I have one thing for you. When you go up to the command module the G&C has 4 switches, 4 or 5 switches that he'd like for you to verify that are turned off after the trim burn as you leave for power tonight.

CDR

Okay, go ahead.

CC

Okay. First the service module - they're all on panel 5 - service module. RCS heaters, quads Alfa and Delta to off; then the SMRCS heaters engine package Alfa

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TIME: 10:25 CST 149100:25 CST

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and Delta to off; and then SMRCS PSN1 heaters to off.
Over.

CDR I believe it's in that configuration
now.

CC Roger. We just wanted to make sure when
you can verify that and, when you leave, just
make sure they are.

CDR Yes, well, that was that low powered
(garble), I think.

CC Roger, understand. Okay.

SPT Houston, SPT

CC Skylab Houston. Go ahead.

SPT Okay, I just finished the major medical
run and I have a few comments I want to make. You got the
right people ready to listen?

CC Yes sir, go ahead, Joe.

SPT Okay. M092 was interesting. The
cabin temp was reading 88 on the workshop panel, 93 on the
ESS. The chamber temp was 97 degrees. We ran the whole run,
30, 40, 50, because the numbers looked okay as we went.
two medical comments: the right volume was much higher
than I've ever seen it on the PLT before. At least twice
the Delta (garble) in leg volume than I've ever seen
before. His initial calf circumferences were both about
a half an inch less than they have been on the ground. He
was perspiring by the end of the run, but his figures,
which you guys will see in all their glory and detail, were
normal. Then we went to M171 and as a lot of us had suspected,
we've got a significant mechanical efficiency problem in
riding the bike, which is going to take us I think a few
days to solve. The harness is not efficient enough.
Paul will describe this in more detail later, but essentially,
he windu up doing a great deal of work with his hands and
not being as efficient with his legs and his big muscles
and he can't get to the high work loads nearly as well.
We terminated that run with a little under 3 minutes to go -
both, for that reason and because of an obvious thermal problem.
It's just too damn hot in here to go 200 watts on that
bicycle.

END OF TAPE

SL-11 MC-215/1

Time: 19:35 p.m. CDT, 149:00:35 CDT

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SPT: - and because of an obvious thermal problem, it's just too damned hot in here to go 200 watts on that bicycle. And while we will run M171's, pending solution of that thermal problem, I'm going to strongly recommend against running it at the (garble).

CC

Roger, Joe, we copied all of that.

SPT

Okay, essentially the M171 people have to realize that their data is being biased by the thermal and the mechanical problems and is I don't think representative at all of deconditioning. And it's not gonna be representative of deconditioning until we get the environment squared away and learn how to ride the bike.

CC

Roger, Joe.

CC

And Skylab, Houston. I only have one question that I was going to pass up tonight but we still have about five minutes left in this pass if - and it concerns the problems that y'all had apparently on the trash airlock dump this morning. And we were wondering if you used a - if the disposal bag that you used that you had the GCTA's in - was that a urine disposal bag or one of the regular kind?

CDR

It was a urine bag.

CC

Rog. I understand.

CC

Skylab, Houston. We're about 40 seconds from LOS. We're going to see you at Hawaii at 01:12.

CDR

Okay, Houston. 01:12 - we'll have to burn in and could you tell me - what did you find out about the vents in the OWS today?

CC

CDR, Houston. If you're asking about the solenoid vent port - did y'all get that capped? We haven't run that test yet I think?

CDR

Yes, they're capped.

CC

Rog. We will be running it and we will let you know.

CDR

Okay.

PAO

This is Skylab Control, 00:37 Greenwich mean time. That concludes playback of the Hawaii, Goldstone and Vanguard pass recorded during the Change-of-shift press conference. During the last few minutes over Vanguard, Joe Kerwin described operation of the experiment M171, metabolic activity, and the associated difficulties in getting accurate measurements because of the combination of mechanical problems with the equipment and the high heat load experienced by the subject. And that over a period of time, the bias can be figured out on how the measurements can be tallied. Thirty-three minutes to acquisition at Hawaii, and at 00:38 - 00:39 Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-11 MC-216/1

Time: 20:12 p.m. CDT, 149:01:12 GET

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CDR - (garble) when's that burn?
CDR Before you get upset - it went off on time.
CC I was already upset. You waited too late.
Roger, (garble) how'd it go?
CDR It went okay, but it sure (garble) makes
that sail bang in the breeze out there.
CC Roger. Incidentally, Pete - -
CDR I can just see the front of the sail from
the command module window.
CC Rog. I understand. Let's don't knock it off.
Incidentally - -
CDR (Garble)
CC Incidentally, Pete, we're going to be com-
manding unattended ATM OPS starting this pass and that will
be continuing and I won't bother to keep you completely up
to speed. Over.
CDR Okay. Now (garble) only shows 1.2 feet
per second and I thought you were supposed - I thought Bob
was supposed to get 2.1.
CC Roger, Pete. Copy and we'll be checking
the bird and keep with it. What kind of burn time did you
have Pete?
CDR One minute and three seconds on two quads,
A and C.
CC Roger, we'll be checking the bird and
keep up with it and let you know.
PLT Hey, Dick. I also got a question on a
cryo configuration. Nobody here really remembers if
it supposed to be this way or not. We have got H2 HEATERS
in AUTO on tank 2. Also O2 HEATERS in AUTO in tank 2. Is
that's what - the way we want it?
CC Stand by 1.
PLT Okay.
PLT No rush. Whenever you find out let us know.
If you want something changed we'll change it. And the heater
configuration on the RCS is what you wanted?
CC Okay, real good. And while you guys are
still by the phone I've got two or three questions that I
wondered - we were wondering if we could ask of you.
CDR Go ahead.
CC Okay. On the flight plan - the - our
activation checklist people were wondering about three or
four items to see if you've got done today. One was the
wardroom SMMD cal, another was the launch restraint removal
from the fecal collector and from the fecal collector filter,
and the third was the transfer of the food overage. Over
PLT Okay, the first (garble) didn't get done.

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Time: 20:12 p.m. CDT, 149:01:12 CST
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I guess I haven't killed the SMD yet, and I think the other two items are both complete.

SPT That's affirmative, Dick. The other two are done.

CC Okay, real fine. Thank you, and one more question for flight planning purposes - did y'all do a fuel cell purge on mission day 3?

CDR Yeah, I did systems housekeeping 4 which was just hydrogen.

CDR It was scheduled yesterday.

CC Roger.

CDR And on day 2 I got oxygen as I remember.

SPT Houston, SPT. There's a thing I don't understand on page 2-21 of the ATM systems checklist concerning enabling and contingency momentum sample. I didn't think that was required. I guess I'd like to know whether you want me to do it or not.

CC Okay, Joe, we'll get you an answer on that.

SPT Thank you.

CC Okay, one more question we had that goes back to the rendezvous day. Prior to launch we had put a procedure in the - in your checklist that had to do with a good visual inspection through the - of the minus-2 SAL, but based on your fly-around the other day it was our understanding that there was no debris of any kind that would possibly block the minus-2 SAL and if you can confirm that we're going to delete that from the flight plan tomorrow.

SPT What's that, the fire alarm? (Laughter)

CC You guys okay?

CDR There was no damage to the minus-2 SAL. I reported the plus-2 SAL had some gold foil flaked off and standing up around it, but the minus-2 SAL was clean.

CC Very good.

CDR The other thing I reported was that obviously the meteoroid shield had scraped across that area and specifically by the wardroom window.

CC Roger, copy.

CC And - -

CDR Say, while you're making your temperature studies a down there, it doesn't appear enough like the workshop is cooling off anymore. What do your thermal guys have to say?

CC Let us get a quick answer for you on that Pete and an answer for Joe on the contingency momentum sample. Yes, we would like to go ahead and take that momentum sample and then go back to experiment pointing mode.

SPT Say, we're back in experiment pointing mode.

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Dick. The procedure I referred to is the business of (garble) inhibiting CMG control and then reabling it. That just doesn't ring a bell with me at all.

CDR And while you're thinking of that, Dick. One other thing. We've been running (garble) blowers and I'd like to keep tomorrow strictly to the flight plan and see how we do that day. And all these little extra goodies that have been coming up in front of this (garble) I put going have a late night tonight dumping this water. I have yet to have a chance to read the probe stuff. So we need to do some catching up and I'd like to see tomorrow and the next day that they'd be normal days - if anything it backs off just slightly so that we could get some stuff squared away here. Because we're eating food so fast that the wardroom is getting dirty. We're dumping trash but we've had a few fruit bag failures and it looks like one of these days we are going to have to halt for about a couple of hours anyhow. (Garble) the place - if we're going to keep it clean.

CC Roger, Pete. (Garble)

CDR Up there's that duct. You can tell the real airflow pattern works great.

CC Rog, Pete we dropped out there for a second but we certainly got your message on the flight plan. And I think we did get a request from G&S - request to inhibit and then re-enable the CMG control so that we can get that contingency momentum sample.

SPT In other words we wouldn't get it if we didn't do that?

CC That's affirmative.

CC Skylab, Houston, we're about 45 seconds from LOS. We're going to see you at Vanguard at - the Vanguard pass will be at 01:42 and we'll have the evening status report there. And also, Pete I'm not sure we understood which of the purges that you did on mission day 3 which was either yesterday or the day before so we need a little bit of a clarification of where there was H2 or O2 or both.

CDR Okay, Dick. I think if you look at the checklist, flight plan for activation, I did what was ever called for. It seems to me on day 2 I did an O2 purge. It seems to me last night I did a H2 purge which is systems housekeeping (garble).

CC Okay, Rog, Pete. Copy and I'll get back with you at the Vanguard.

PAO This is Skylab Control. Early acquisition there at Hawaii, at least compared to the AOS clock. When the spacestation first came up over Hawaii, Pete Conrad called down, "Hey, when was that burn supposed to be?" He was pulling the collective legs of the people in the control center pre-

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...the Delta which actually had taken place a
few minutes before. The Delta did report that the burn did
go on time, which was 0107136 Central daylight time. Burn
time was normal one minute and three seconds. Two thrusters
of the service module reaction control system - however, the
DELTA-V counter on the command module only showed 1.2 feet
per second instead of 2.1. The ground said they would check
the tracking over the next several hours to see what the effect
was of the burn and try to sort out whether it might be a faulty
DELTA-V reading onboard or some other reason for not getting
the correct onboard reading for the maneuver. Vanguard in
18 minutes - back up at that time. And at 01:24 Greenwich mean
time, this is Skylab Control.

END OF TAPE

SL-11 MC-217/

Time: 20:42 CDT, 149:01:41 GMT

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PAO This is Skylab Control, 01:41 Greenwich mean time, 45 seconds out of the tracking ship Vanguard for the next to the last tracking station pass before the crew of Skylab space station sacks out for the evening. Current orbit measurement, 233.8 nautical by 239.6. Awaiting confirmation lock-on by the antennas at Vanguard. Starting to get a line noise now, we'll bring up the circuit.

CC Skylab, Houston. We're AOS at Vanguard for the next 9 minutes and before your evening status report, I have one small note for you.

CDR Go ahead.

CC Roger. We have looked at the temps, Pete, and they do appear to be leveling off. And we think we may make a little money this evening while you guys sleep by enabling the secondary coolant loops. So, we intend, at this pass, to command it ON and you should get a momentary secondary coolant flow of CAUTION and WARNING so don't be surprised at that. In answer to your questions that temps do appear to be leveling off some, we're not sure whether - what effect your increased BTU output today has been, but we're going to turn on the secondary coolant loop up.

CDR Okay.

CC And with that, I'm ready for you to start on the evening status report or whatever you have.

CDR Okay. First thing is I just put the BMMD CAL and the transcribed portion of the evening status report on B channel for you.

CC Okay.

CDR I got so many books in my hands, I got to lock into the floor. While I'm getting organized - We're trying to set the alarm, just a second.

CDR Okay. While we're getting organized, I believe, through the binoculars, we've sighted our S011 2 here, just a little while ago.

CC Roger.

CDR Okay, the evening status report. Let me give you Foxtrot first.

CC Okay, go ahead.

CDR CDR ate everything.

CC Good.

CDR And he used no salt.

CC Roger.

CDR The SPT didn't eat his bread or jam for breakfast, nor his bread and ambrosia for dinner, nor his coffee and one butter cookie. He used no salt, and that's it.

CC Roger, got that.

CDR The PLT did not drink his coffee with

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breakfast, nor did he eat his bread with dinner, and he did not eat his peanuts or coffee for snacks. And he had two optional salt packages.

CC

Okay, got it.

CDR

Photo log, day 148, 16 millimeter M151-M092/171

CIL-2 OOMTL2. (Garble) The CIL2 was back at C-3 and that's it.

CC

Okay, got that.

CDR

(Garble) percent of the film, Joe says

because they're a lot slower getting it done.

CC

Roger.

CDR

Flight plan deviations - none. Times

we're running low longer. I don't see any constraints other than we took on a lot to do today with your extra goodies.

No storage item changes except as reported on B channel and

no inoperable equipment except as reported on B channel. And

the only flight plan item not accomplished today that was

supposed to be was CMMD CAL and let me get a reading on that.

CC

Okay.

CDR

And Joe is going to do that tonight.

CC

Okay, we'll do that tonight. Very good.

CC

And he advised we're going to reset a

TACS attitude C&W light that was inhibited during the TRIM maneuver awhile ago. And you got anything else on the status report?

CDR

No sir, it's been another long day and

I think we look forward to the orbital OPS tomorrow. I

hope we can speed up our own time line. I can't really put

my finger on why we're so slow, but part of it is being absolutely sure that we're doing it right.

CC

Roger. I understand Pete, and we're quite

satisfied. The one bit - the last note that I have here -

getting back to the command module fuel cell purges is - in a

checklist - in a systems checklist on page 4-1, on the four

day checks, CM-4 - HK CM-4, the very last line under that says

perform two-days systems checks and it is a little bit con-

fusing. But on the 4-day checks we want you to purge both

O2 and H2. So if you did miss that, we need to get an H2 purge

this evening. I'm sorry - an O2 purge this evening.

CDR

Okay, I got that pretty late last night

and I was pretty foggy, so I guess I missed the O2 part of it.

I'll give her an O2 purge tonight and then we understand that, from now on.

CC

Okay, good, we'll be back on schedule.

Standby one.

CC

And Skylah, Houston. We're going to -

we're doing a MOMENTUM DUMP now and it appears the way it's

going that we probably will lose - that we probably will lose

track on the star track of the star, so I wanted to give you

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Time: 10142 p.m. CDT, 149:01:41 GMT

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the star and the gimbal angles so that you can reacquire the star-tracker for us when you get out into daylight. Over.

CDR

Fire away.

CC

0680; OUTER GIMBAL, plus 1670.

CDR

plus 1670.

CC

Roger. That's correct.

CC

Incidentally, guys, we're about a minute and 20 seconds away for LOS. We'll see - you'll have a Vanguard pass, medical conference at 03:21 and we've been watching TV today and it sure looks like fun the way you guys have been moving around up there.

CDR

It's a real blast. Let me tell you.

CC

Well, Hank's been kind of hogging the mike for the last couple of days but everybody's been watching you and we all wish we were there.

CDR

Well, once we figured out we weren't going to get sick it's been (garble) and we've done a little ricocheting off the walls but, I still hold the record for some spectacular guidos. I won't call them control, but we sure has been getting around in here.

CC

Roger that.

PAO

This is Skylab Control, 01:52 Greenwich mean time, LOS at tracking ship Vanguard at the start of Skylab revolution number 208, 56 minutes to Hawaii. Over Vanguard, Skylab Commander Pete Conrad said that he had a possible sighting of the S-II booster stage using binoculars. He didn't report whether or not it was from the wardroom window or from some of the other openings and hatches in the Skylab cluster. In the food report, Conrad said that he ate everything, except that he didn't put - use any salt. Also, during the runs, by the Science Pilot and Pilot, of the M092 and M-171 experiment combination they did take some 16 millimeter motion pictures. That was part of his film usage report. Back in 55 minutes for the final Hawaii pass of the evening. And at 01:54 Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-11 MC-21A/1

Time: 21:49 CDT 149:02:48 GRT

5/28/73

PAO This is Skylab Control 2 hours 48 minutes Greenwich mean time. About 30 seconds out of Hawaii for what is scheduled to be a medical conference pass. However, the circuit may be turned back over to the Capcom for a portion of this pass. We'll stay up with the circuit in case there is some conversation between the Capcom and the crew of Skylab. A 7-1/2 minute pass. It should be the final one of the evening before the crew goes to bed. Skylab Control standing by.

PAO This is Skylab Control 2:57 Greenwich mean time. Apparently, the medical conference took the entire Hawaii pass with no operational air-ground. The crew at this time is scheduled to begin their sleep period, looking forward to a day of science investigations tomorrow. Next station, Vanguard tracking ship in 22 minutes. At 2:58 Greenwich mean time, Skylab Control.

END OF TAPE

SL-11 MC-219/1

Time: 22:21 CDT 149:03:20 GET

5/28/79

PAO This is Skylab Control at 3 hours 20 minutes and 44 seconds Greenwich mean time. We're 22 seconds from acquisition of signal at Vanguard. It is believed that the crew may have gone to sleep by now. The last pass at Hawaii was taken up with a medical conference. And we may hear something here from, from the crew. Because it is possible they are still awake. The medical conference was entirely confidential. We heard no sound at that time. We have 3 seconds until acquisition of signal.

CC Skylab Houston. We're AOS at Vanguard. We've got you for about another 5 minutes and Chuck said that you might want to have something to say to us.

CDR Yeah. We had a failure on the secondary loop that you turned on. We've taken command of it. I believe you had - I don't which pump you had on, but you had it - the number 1 inverter on. It blew the breaker.

CC Roger, copy.

CDR Okay, let me give you the configuration we're in right now, and you can command it up if you want, and we'll give it back to you and then you can play with it.

CC Okay, fine. We did notice that we were on pump Bravo. We were going to ask you a question about that in the morning. Go ahead.

CDR Okay, we're on 2VC pump Bravo and let me know when you've got it commanded and I'll go put her back to command for you.

CC Roger that. Stand by.

CDR Also we have not reset the circuit breaker. And we'll stand by on your word.

CC Okay.

SPT Hey, Houston, SPT. Can I transfer a couple of comments?

CC Yes sir, go ahead.

SPT Okay, just catching up on some pads. I noticed your CMG number 3 wheel speed is erratic on the ground. It's not erratic up here, it is just flat zero. So it does (garble) transducers.

CC Roger, and after we transmitted that message, PLT, it went to flat zero down here too.

SPT Okay. The (garble) copying changes for the ATH checklist and cue cards. And you have one for the darkside prep that says after you power up the (garble) loop gyros wait 90 seconds. And I wondered for what? Because all you're doing is configuring another experiment which is (garble) in 90 seconds (garble).

CC Roger, stand by.

CDR Okay, Houston the other thing is the

SL-11 NC-219/2

Time: 22:21 CDT 149:03:20 GMT

5/28/73

the waste tank has been dumped to 15 percent.

CC

Roger, thank you.

CC

And a quick answer on the APC rate gyros. That was just in the event that we had not got them on the line, that was 90 seconds for spin-up time. And also on that, be advised we were - there is another checklist change, it's going to be coming up tonight on the EREP checklist. And it goes in about 2 or 3 places in the checklist. So we're going to transmit this one message 3 times tonight. And so in the morning when you get it it's just so that you can cut and paste instead of write.

CDR

Okay.

CC

We just figured - -

CDR

I've got one other thing for you.

CC

Okay, go ahead.

CDR

Some time tomorrow at their convenience.

I would like to get into a private comm with the Flight Director, Mr. Craft, and Mr. Slayton. It's not (garble) any emergency right now.

CC

Roger, understand Pete, will do.

CDR

Just any time tomorrow.

PLT

Hey, Richard.

CC

Go ahead.

CC

Before you - -

PLT

I haven't had a chance - -

PLT

I haven't had a chance to look it up

yet. I see one thing I got tomorrow's EREP mag. Is that loading up the magazines of the new cassettes we brought up?

CC

That's affirmative Paul, and if you -

and we are ready to do our commanding. So if you'll go off and then command, we'll go ahead and do our commanding on the coolant loop.

PLT

Hear that Pete?

CDR

Yeah.

CC

And we do not want to reset the circuit

breaker now.

CDR

Roger.

CC

And we're about 50 seconds from LOS here at Vanguard. We'll see y'all in the morning. Our first voice comm pass is about 25 or 30 minutes after you wake up.

CDR

Okay, we look real good. We're going to bed in about 15 minutes. I think we're slowly cranking it around to the right schedule.

CC

Hey, sounds real good. See you tomorrow.

CDR

Bye bye, have a good night.

CC

Same to you. Good night.

SL-11 MC-210/3

Time: 22:21 CDT 149:03:20 GMT

3/26/73

PAO Skylab Control. We have 21 seconds to loss of signal and the space ship communicator has said good night for the evening and the crew has also said good night. There is some indication that the pilot, Paul Weitz, has requested a private conversation with Astronaut Director Slayton, the flight director, and Gene Krantz, the head of the Flight Crew Operations Division, for tomorrow and that he indicated that was not in regard to any sort of an emergency. But he did request a conversation of that sort. And they will take that under advisement here and Flight Control will try to give you a report on that a little bit later. This is Skylab Control. We've had loss of signal now at Vanguard. Our next pass is at Ascension in about 5 minutes and 20 seconds. We don't expect to hear from the crew at that time. They should be now going to sleep. Again they are a little bit behind schedule, about 30 minutes after the hour. This is Skylab Control.

END OF TAPE

SL-II MC-220/1

Time: 23:06 CDT 149:04:06 CDT

5/28/73

PAO Skylab Control at 4 hours 7 minutes Greenwich mean time. We have a brief statement now from Dr. Hawkins on the private medical conference that was held over the Hawaii pass during the last revolution. And the statement is this: "The Skylab crew feels in good condition and has no complaints. The pilot had no physical complaints today during MO92. That's the lower body negative pressure experiment. And M171, the metabolic activity experiment. But, because of the elevated temperatures still existing in the orbital workshop it was decided by the science pilot not to have the pilot finish the highest workload of the M171," signed Dr. Hawkins. I want to explain a little more in detail. The M171 metabolic activity experiment requires very heavy workloads in bicycling, much higher than we would experience normally on Earth in bicycling. These considerable strains do tax the system a great deal. It was decided by Dr. Kerwin that this would probably not be a good idea in view of the high temperatures. But the pilot himself, Paul Weitz, who was doing the experiment, said that he did not feel in any way uncomfortable and he would have been willing to go on to a higher level. So, that's an explanation of what happened tonight at the private medical conference over the Hawaii pass during the last revolution. This is Skylab Control at 4 hours 8 minutes and 24 seconds Greenwich mean time.

END OF TAPE

SL-11 MC-221/1

Time: 23:24 p.m. CDT, 149:04:23 CDT

5/28/73

FAO Skylab Control. We had a brief interchange here with the crew - there was a question on a light being out in the tape recorder and they asked if the data was being dumped there using that tape recorder and if the light should have been out, and the answer from the ground was no it was not and did not seem at this time to pose any kind of a problem and that's the end of the conversation at Guam, although there is still acquisition of signal there. We'll see if we can't get some answers for you on why - what the problem was and get back to you a little bit later. This is Skylab Control signing out again at 23 minutes 56 seconds after the hour.

END OF TAPE

SL-12 MC-221A/1

Time: 23:24 p.m. CDR, 149:04:24 GMT

5/28/73

CC

Skylab, Houston. Did you call?

SC.

Yeah. This is SPT. I was tape recording this (garble) noticed that my record light was out. Did you guys dump the recorder?

CC

Stand by for just one second.

CC

SPT, Houston. Negative. We're not dumping the data tape recorder.

SC

Okay. Maybe I knocked it off with my elbow or something.

CC

Okay, Joe. See you. Good night.

SC

Good night.

END OF TAPE

SL-11 MC-222/2

Time: 25:53 p.m. GMT, 149:04:52 UET

5/28/73

I said, the average, though is about 85 degrees right now and coming down by about a fraction of a degree an hour. This is Skylab Control at 55 minutes after the hour.

END OF TAPE